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PERSPECTIVES

ON LABOUR AND INCOME

SPRING 2012

Vol. 24, No. 1

- Paid and unpaid work over three generations
- Seniors returning to Canada
- Factors associated with voting



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PERSPECTIVES

ON LABOUR AND INCOME

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5 Paid and unpaid work over three generations

Katherine Marshall

Research suggests that the division of labour and men's and women's role expectations are continuing to evolve. This may be especially true for Generation Y, those born between 1980 and 1995, who grew up during a period of changing family dynamics and family formation. This article examines the changes in the participation in, and time spent on, paid jobs and unpaid household work for individuals age 20 to 29 from three generations - late Baby Boomers, Generation X and Generation Y.

19 Seniors returning to Canada

Kristyn Frank and Feng Hou

The age and other characteristics of emigrants who return to Canada may have social and economic implications - particularly with respect to transfer programs for seniors. This study uses census data to address several questions related to Canadian residents who previously emigrated to other countries: Do seniors account for a large proportion of returned emigrants? From where do older emigrants return? Do the characteristics of older returned emigrants differ from those of older Canadians who did not live abroad? Do the amounts and sources of income received in old age differ between these groups? How do all these results differ for the Canadian-born versus immigrant returnees?

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- **Managing Editor**
Ted Wannell
613-951-3546
ted.wannell@statcan.gc.ca
- **Editors**
Nikki Burke
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- E use with caution
- F too unreliable to be published

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30 Factors associated with voting

Sharanjit Uppal and Sébastien LaRochelle-Côté

This article investigates the factors associated with voting during the May 2011 federal election. Voting rates are examined across personal, family and labour market characteristics. Multivariate techniques are used to account for many of the characteristics associated with voting. The study is based on several supplemental questions, commissioned by Elections Canada, that were added to the May Labour Force Survey. Voting trends and international comparisons, based on administrative data, are also presented.

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Perspectives on Labour and Income

The quarterly for labour market and income information

Highlights

In this issue

■ Paid and unpaid work over three generations ... p. 5

- The study examines the profile and the time spent on paid and unpaid work for young adults from three generations—late baby boomers (born from 1957 to 1966) when they were age 20 to 29 in 1986, Generation X (1969 to 1978) which was in that age group in 1998, and Generation Y (1981 to 1990) which reached it in 2010.
- Young adults from Generation Y were more likely to be single (67%), living at home (51%), and going to school (19%) compared with their counterparts in the two previous generations.
- Time spent on employment and housework was also most alike for young men and women of Generation Y. At ages 20 to 29, late baby boom men did, on average, 1.4 hours more paid work per day than women. In Generation Y, this difference had narrowed to 1.1 hours.
- When late baby boomer women were age 20 to 29, they did 1.2 hours more housework per day than men. By the time Generation Y was the same age, the difference had narrowed to 0.4 hours.
- Average daily time spent on paid work and housework by men and women in young dual-earner couples is more alike for those without children and particularly so for Generation Y.

■ Seniors returning to Canada ... p. 19

- This study uses census data to examine the characteristics of Canadian residents who lived in another country 5 years previously. Such 'returnees' include the Canadian-born, as well as immigrants who moved on to other countries before returning to Canada.
- Although the study was motivated by the potential impact of senior returnees, most returning emigrants are relatively young. In 2006, three-quarters of returnees were age 20 to 49 and 13% were 60 or over. These senior returnees comprised less than 0.5% of the 60-and-over population.
- Senior returnees most frequently returned from the United States or the United Kingdom. However, there has been a shift in the top countries from which Canadians return, with an increasing share returning from developing countries—particularly mainland China.
- The settlement patterns of Canadian-born and immigrant returnees were very different. Older immigrant returnees were twice as likely as their Canadian-born counterparts to live in 1 of the 3 major CMAs and one-third as likely to live in non-urban areas.
- Seniors who return to Canada are a highly educated group. One-half of them have at least some postsecondary education and about one-third have a university degree. Moreover, they have a higher

- Returnees age 60 and over drew less income from government transfer payments than others in this age group but Canadian-born returnees had higher average total income due to higher market income. Despite their higher average income, older returnees, particularly immigrants, were more likely to fall below low-income thresholds than others, reflecting a more skewed distribution of income among returnees.

Factors associated with voting

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- Voting rates increased with both age and education. However, the education effect was much stronger among young voters, such that the difference in voting rates between 18- to 24-year-olds and 25- to 34-year-olds disappeared after controlling for education and other factors.
- Among family types, single parents with young children were the least likely and couples with no young children the most likely to vote.
- Home owners had significantly higher voting rates than renters.
- Overall, immigrant citizens were less likely to vote than the Canadian-born, but voting rates generally increased with time in Canada. Voting rates were highest for immigrants from Northern and Western Europe, the United States, Australia and New Zealand. Conversely, immigrants from East Asia, West Central Asia and the Middle East had the lowest voting rates.
- Residents of Prince Edward Island, New Brunswick and Quebec had higher-than-average voting rates while Newfoundland and Labrador, Alberta and Manitoba had rates below the national average.
- Employed people were more likely to vote than the unemployed or those not in the labour force, after controlling for other factors.
- Looking only at the employed, those working in the public sector or in high-skill occupations were the most likely to vote. Voting rates were lower for those working 40 hours or more per week and in less-skilled occupations.

- Since Canadian voting rates fell in the 1990s and voting in recent American presidential elections has increased, a long-standing gap between Canadian and American voting rates has closed. Trends in the United Kingdom were similar to those in Canada, but their voting rates remained above those of their North American counterparts in most election years.

What's new?

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From Statistics Canada

- Income adequacy in retirement
- Economic growth in Canada and the United States
- Recent trends in Canada's labour force participation rate
- Risk of layoff and earnings losses of laid-off workers
- Personal networks and the economic adjustments of immigrants
- Export growth, capacity utilization and productivity growth
- Registered retirement savings plan contributions
- Aboriginal peoples and the labour market
- Education outcomes of immigrant children
- Do relative Canada/U.S. prices equate to the exchange rate?
- Exchange-rate adjusted prices in Canada

From other organizations

- General and vocational education and labour-market outcomes
- Fixed-term and permanent employment contracts
- Families, time, and well-being in Canada
- Private equity and employment
- Changes in physical exertion over the business cycle
- Occupation-specific work experience and job matching through social networks
- Poverty, perceived ability and access to education equity

Perspectives

Paid and unpaid work over three generations

Katherine Marshall

Adapted from "Generational change in paid and unpaid work,"
Canadian Social Trends, Winter 2011, no. 92, Statistics Canada Catalogue no. 11-008-X,
<http://www.statcan.gc.ca/pub/11-008-x/2011002/article/11520-eng.htm>.

Most adults spend years working at a paid job and working at home to maintain and run a household. Many factors influence the amount and type of paid and unpaid household labour performed, including where people are in the life cycle, the economy, their family status and social expectations. Understanding the distribution and division of paid and unpaid work over the life course helps with the development of workplace and family-related programs and policies.

Although a division of labour still exists within families, the hours of paid work, average earnings, and time spent on domestic labour and child care are becoming more alike between spouses in Canada and other Organisation for Economic Co-operation and Development (OECD) countries (Kan et al. 2011; Marshall 2009 and 2006). A parallel narrowing of the household work gap has been found among Canadian teenage boys and girls (Marshall 2007).

These findings suggest that the division of labour and role expectations for men and women are continuing to evolve. This may be especially true for Generation Y, those born between 1980 and 1995, who grew up during a period of changing family dynamics and family formation. Their baby boomer parents, born and raised after the Second World War, were predominantly dual earners and a substantial number of mothers were the primary earners (Sussman and Bonnell 2006). Furthermore, during Generation Y's childhood, some of their fathers were likely to have taken paid parental leave, a program that was introduced and offered to fathers for the first time in 1990.

Age cohorts exposed to the same historical and cultural phenomena tend to share similar points of view (Ryder 1965). Furthermore, the development of generational attitudes and behaviours are thought to be created in the formative years and often stabilize in adulthood (Williams and Davidson 1996; van den Broek 1999). Has being raised in a dual-earner culture influenced how the men and women of Generation Y participate in paid and unpaid household work? Has the division of labour within couples of this generation continued to converge?

This article uses data from the 1986, 1998 and 2010 General Social Survey (GSS) on Time Use to examine changes in the participation in and time spent on paid work and unpaid household work of individuals age 20 to 29 from three generations—late baby boomers and those in Generations X and Y (see *Three generations* and *Data source and definitions*). This age range is selected so that Generation Y can be included in the study. The 2010 data offer a first-time opportunity to examine the time use of Generation Y—a group now in early adulthood. The final section looks at the distribution of time spent on paid and unpaid work within dual-earner couples.

More of Generation Y living in parent's home

A profile of late baby boomers and Generations X and Y shows that several socio-economic characteristics have changed considerably from one generation to the next (Table 1). Some noteworthy generational differences include the following:

Katherine Marshall is with the Labour Statistics Division. She can be reached at 613-951-6890 or katherine.marshall@statcan.gc.ca.

- **Living in a couple is less common:** The percentage of 20- to 29-year-olds married or living common-law² has dropped substantially from 48% of late baby boomers to 37% for Generation X and 33% for Generation Y. This finding is consistent with the well-documented increase in the average age of first marriage for both men and women over the past few decades (Statistics Canada 2009).
- **Fewer have children:** Postponed marriage is linked to postponed parenthood. In 1986, 29% of late baby boomers age 20 to 29 had children compared with 19% for Generation Y in 2010.
- **Employment rate is converging between men and women:** Almost three-quarters of those in their 20s reported being employed in the three years under study; but while men had a 10% higher employment rate than women in 1986, their rate was only 3% higher in 2010.

Table 1 Profile of late baby boomers and Generations X and Y at ages 20 to 29

	Late baby boomers (born 1957 to 1966)	Generation X (born 1969 to 1978)	Generation Y (born 1981 to 1990)
Total population	4,552	4,186	4,663
		'000	
Sex		%	
Men	51	50	51
Women	49	50	49
Age			
20 to 24 years	50	48	49
25 to 29 years	50	52	51
Marital status			
Married/common-law	48	37	33
Single	50	61	67
Other	F	F	F
Has children	29	22	19
Employment rate			
Both sexes	73	72	74
Men	78	76	75
Women	68	69	72
Student			
Both sexes	15	18	19
Men	16	20	19
Women	13	17	20
Lives at home with one or both parents			
All ages (20 to 29 years)	28	31	51
20 to 24 years	43	46	73
25 to 29 years	12	17	30
Immigrant	11	16	18
Reports no religion	14	25	35

Sources: Statistics Canada, General Social Survey and Labour Force Survey, 1986, 1998 and 2010.

- **Staying in school longer:** Among late baby boomers, 15% reported their main activity was going to school, compared with 18% for Generation X and 19% for Generation Y. The proportion attending school has increased more for women than men.
- **More are living at home with their parents:** The percentage point increase of young adults living at home with their parents was particularly steep between Generation X and Y, up from 31% in 1998 to 51% in 2010. The upward trend to live at home longer is apparent among both the 20-to-24 and 25-to-29 age groups.³
- **Immigrant population is increasing:** The proportion of young adults who were born outside Canada has increased steadily. In 1986, 11% of late baby boomers were born outside Canada compared with 16% for Generation X and 18% for Generation Y. This trend is consistent with the increasing number of immigrants since the 1990s (Citizenship and Immigration Canada 2011).
- **Less religious affiliation:** Religiosity has decreased substantially among young adults. While 14% of late baby boomers reported having no religion, more than one-third (35%) of Generation Y did so.

Time spent at paid and unpaid work similar across the generations

Despite the varying socioeconomic characteristics of the three generations, findings from the GSS time use surveys indicate that, overall, the participation in and time spent

Three generations

Through the works of economist David Foot and author Douglas Coupland, most people are aware of the generation to which they belong. The baby boom generation, born between 1947 and 1966, is probably the best known, but much has been written about the baby bust (1967 to 1979) and echo boom (1980 to 1995) generations, also known as Generations X and Y (Foot 1998; Coupland 1991).

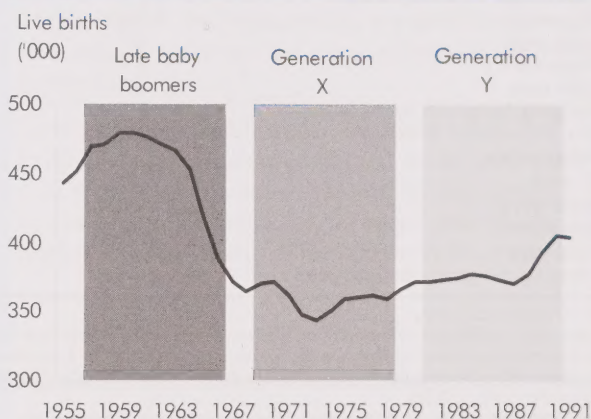
Generations are delineations of birth years based on distinct historical periods. They include people born during a similar economic and cultural time period, which helps shape attitudes and behaviours. Studying generational differences improves insight into potential future social and economic change. According to Foot, demographic dynamics explain "two-thirds of everything" including consumer behaviour, demand for services, education and family formation, all of which can influence public policy (Foot 1998).

This study examines trends in time spent on paid and unpaid work for the three generations when they were between the ages of 20 and 29. This age range was chosen for comparability purposes and because it is roughly the age range of Generation Y in 2010. The timing of the previous time use surveys also makes this study possible. For example, in 1986 (the first year of the Canadian GSS on Time Use) late baby boomers¹ who were born between 1956 and 1966 were age 20 to 30. Therefore, for comparability, late baby boomers born between 1957 and 1966 are included in the study as this represents the 20-to-29 age group in 1986. The 1998 GSS on Time Use is used to examine Generation X. Although this generation's birth years range from 1967 to 1979, the study includes the years 1969 to 1978 as this represents those who were age 20 to 29 in 1998. Finally, those born between 1981 and 1990 are selected from the 2010 GSS on Time Use to represent Generation Y at age 20 to 29.

Late baby boomers were part of the second wave of the baby boom and included the peak years of the annual birth rate (Chart A). Between 1957 and 1966 there were approxi-

mately 4.6 million births in Canada. The introduction of the birth control pill and the increased involvement of women in the labour market have been linked to the substantial fall in the birth rate starting in the 1960s (Foot 1998). Between 1969 and 1978, there were 3.6 million births, and between 1981 and 1990 there were 3.8 million births. The total population by birth year changes over time as deaths and emigration occur and as immigrants arrive.

Chart A The annual number of births was highest for late baby boomers



Note: Shaded areas represent selected birth years of the generations under study. Based on these birth years, in 1986, 1998 and 2010, late baby boomers, and Generation X and Generation Y, respectively, were age 20 to 29.
Source: Statistics Canada, Vital Statistics.

on paid work and unpaid household activities is roughly similar across the years. Averaged over the week, 24-hour diary data show that about one-half of young adults age 20 to 29 in all three periods (1986, 1998 and 2010) worked at a job the day they were interviewed, and more than three-quarters did some form of unpaid household work including housework, child care or

shopping for goods and services (Table 2). At 47%, the daily participation rate in paid work was lowest for Generation Y.

In terms of unpaid household work, daily participation is consistently highest for housework, which increased from 63% among late baby boomers in 1986 to 70% among Generation Y in 2010, and

relatively low for child care (roughly 1 in 5) and shopping and services (roughly 2 in 5). Participation in child care is low for all three generations because only a minority of those age 20 to 29 had children.

Among those who participated in the selected activities on Diary Day, on average much more time was

Table 2 Participation in and time spent on selected activities for late baby boomers and Generations X and Y at ages 20 to 29

	Late baby boomers (ref.) (born 1957 to 1966)	Generation X (ref.) (born 1969 to 1978)	Generation Y (born 1981 to 1990)
average hours per day			
Total population			
Paid work	4.3	4.7	4.1*
Unpaid work	2.6	2.7	2.6
Housework	1.3	1.3	1.2
Child care	0.6	0.6	0.6
Shopping for goods and services	0.8	0.8	0.8
Participants on Diary Day			
Paid work	8.5	8.8	8.7
Unpaid work	3.5	3.1	3.2**
Housework	2.1	1.7	1.7**
Child care	2.4	2.6	3.0***
Shopping for goods and services	2.1	1.9	1.9
Participation		%	
Paid work	51	53	47***
Unpaid work	76	86	81***
Housework	63	77	70***
Child care	23	23	20**
Shopping for goods and services	36	41	39

(ref.) = reference group

* statistically significant difference for Generation Y from Generation X at $p < 0.05$ ** statistically significant difference for Generation Y from late baby boomers at $p < 0.05$ *** statistically significant difference for Generation Y from both Generation X and late baby boomers at $p < 0.05$

Note: Time per day and participation rates are averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1986, 1998 and 2010.

spent on paid work (ranging from 8.5 to 8.8 hours per day) than unpaid work (ranging from 3.1 to 3.5 hours per day). Two notable changes between 1986 and 2010 include a significant decrease in the average time spent by participants on housework, down from 2.1 to 1.7 hours, and an increase in child care from 2.4 to 3.0 hours.

The change in housework time is likely linked to the greater proportion of young people living at home who, generally, do less housework than those living on their own. However, findings for the total population show that there

has been an overall decline in time spent on housework in Canada and the United States (Marshall 2006; Bianchi et al. 2000). Since the daily participation rate for housework has increased and the time participants spend on it has decreased, the average time spent on housework spread over the population has changed only slightly over the generations (from 1.3 hours in 1986 to 1.2 hours in 2010).

The increase in time spent on child care may be due to the fact that Generation Y parents have younger children at home. In 2010, among Generation Y parents, 56%

had an infant (under age 2) to care for, compared with 48% for Generation X in 1998.⁴

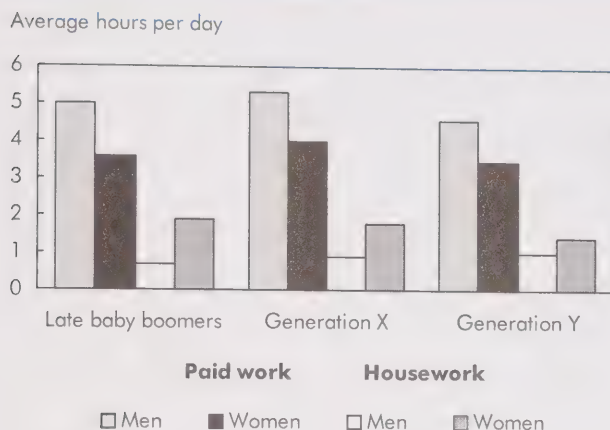
Although the global picture of generational change in paid and unpaid work appears nominal, trends by sex tell a different story. The remainder of this paper focuses on differences between men and women in paid work and housework among late baby boomers, and Generations X and Y. Housework is the only unpaid work activity selected since it makes up the bulk of all unpaid household work and, by necessity, many core activities such as meal preparation and clean-up, indoor cleaning and laundry are usually performed on a daily basis. Child care is an important topic but would require a separate, more in-depth analysis.

Work patterns most similar between Generation Y men and women

As shown, averaged over the population, time spent per day on paid work and housework for those age 20 to 29 has remained relatively stable over the three generations. However, hidden in these averages are differences between men and women, as well as a reduction in the magnitude of these differences over time. In terms of the daily participation rate and average time spent, male and female differences in both paid work and housework have steadily declined from 1986 to 2010.

In 1986, on average, late baby boomer men worked 1.4 more paid hours per day than women, while the difference in paid work among Generation Y men and women stood at 1.1 hours in 2010 (Chart B). In terms of housework,

Chart B Hours of paid work and housework the most alike for Generation Y men and women



Note: For the population age 20 to 29 in each generation, daily hours are averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1986, 1998 and 2010.

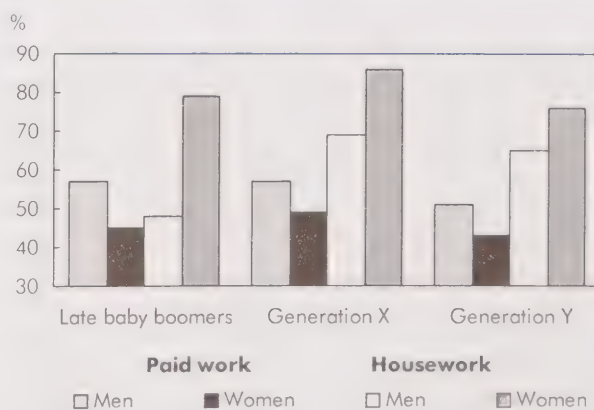
reported doing some housework on Diary Day; by 2010, 65% of Generation Y men of the same age range and 76% of women reported doing housework—a gap of 30 percentage points in 1986 and 11 percentage points in 2010.

Children have opposite effects on the paid work of men and women

Several factors can influence the degree of involvement in paid work and housework among young adults, including student and family status, having dependent children at home and living arrangements. Although more difficult to measure, cultural expectations and trends can also affect behaviour. In order to determine which factors are associated with time spent on paid work and housework, separate linear regression models were run for men and women from each generation.

Even though the difference has narrowed over time, in 2010 young Generation Y men spent more time on paid work than women (4 hours 35 minutes per day versus 3 hours 32 minutes, averaged over the population). However, many of the characteristics associated

Chart C Over time, participation in paid work and housework has also converged for men and women



Note: For the population age 20 to 29 in each generation, participation rates are averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1986, 1998 and 2010.

women age 20 to 29 did 1.2 hours more per day than men in 1986, but only 0.4 hours more in 2010. Note that time spent on housework by participants has also narrowed between men and women—due entirely to a decrease in the time women spend on housework. In 1986, among those who did some housework on Diary Day, women did 2 hours 25 minutes of housework and men 1 hour 31 minutes; in 2010, women did 1 hour 54 minutes and men 1 hour 34 minutes (data not shown).

Similar to the findings on paid work hours, men's daily participation rate in paid work has also been consistently higher than women's—but again, the extent of the difference has declined with each time period. For example, there was a 12 percentage point difference in the paid work participation rate of late baby boomer men and women in 1986, and an 8 percentage point difference for those of Generation Y in 2010 (Chart C).

The narrowing of the gender gap in daily housework participation rates is the most noticeable. In 1986, 48% of late baby boomer men and 78% of women

Data source and definitions

Every year since 1985, the **General Social Survey (GSS)** has interviewed Canadians age 15 and over living in the 10 provinces on a wide range of issues. Using a 24-hour diary instrument, the GSS has collected detailed information on time use in 5 years (1986, 1992, 1998, 2005 and 2010). Individual activities are recorded sequentially over a 24-hour period, which is known as **Diary Day**. All activities are subsequently coded to a standard international classification. Each day of the week is sampled, and calculations from time use data are usually averaged over a 7-day period. While the 1986 survey collected data during the months of November and December only, all other cycles covered a 12-month period.

Since the GSS is a random-digit telephone survey and the frame consists of landline telephone numbers, households with cell phones only are excluded from the sample.

Target population: all respondents age 20 to 29 at the time of the 1986, 1998 and 2010 surveys, with sample counts of 2,400, 1,700 and 1,500, respectively. The age range and respective survey years cover the majority of late baby boomers, and Generation X and Generation Y when they were in their 20s (see *Three generations* for details).

Paid work: time spent on all activities related to a job or business. The time use surveys also include total time spent travelling to and from the workplace as well as unpaid work in a business and on a farm.

Unpaid household work: time spent on all household work and related activities including housework, child care and shopping for goods and services.

Housework: is one form of unpaid household work and is often divided into core and non-core activities—this study includes time spent on both. Core housework includes time spent on meal preparation, meal clean-up (doing the dishes, clearing the table), indoor cleaning (dusting, vacuuming) and

laundry. Non-core work includes activities such as outdoor cleaning, mending or sewing, interior or exterior maintenance and repair, gardening, pet and plant care, and household administration.

Living with one or both parents: all those currently at home with one or both parents as well as those who are temporarily away at school or for seasonal work. Anyone temporarily absent is coded as living in the household if he or she spends at least 30 days of the year at home.

Dual earners: are defined as married or common-law couples in which the main activity of both partners in the previous 7 days was “working at a paid job or business.”

Activity participation rate: the proportion of the population (or subpopulation) that reported spending some time on a particular activity on Diary Day. The participation rate is a daily rate and, unless otherwise specified, the rate is an average daily rate over a 7-day week (average of the daily rates for Sunday-through-Saturday Diary Days).

Average time spent on specific activities of the population or subpopulation: the total time all respondents reported spending on a given activity divided by the population, and averaged over a 7-day week. The average time spent on activities for participants refers to the average time spent only for those who participated in the activity on Diary Day, but again averaged over 7 days.

Linear regression models: were used to examine the relationship between time spent (number of minutes) on paid work and housework on Diary Day and selected explanatory variables. Models were run for both men and women from each generation. Multicollinearity diagnostic tests were run for all models and bootstrap weights were used to adjust for the survey design.

with the number of hours spent in paid work are the same for both men and women and are constant across the generations. For example, when controls for other factors were taken into account, students were found to do significantly less paid work than non-students—not a surprising finding since attending school is the main activity of students (Table 3). However, over time students have increased their participation in paid work on Diary Day, confirming other findings that show an increasing proportion of full-time students who combine school and employment.⁵

For Generation Y men and women, having more than a high school education had a significant positive influence on time spent on paid work. Having more

education likely helped with finding or keeping a job during 2010—a recovery year in the economic cycle. During the 2008/2009 economic downturn, job loss was particularly high among youth and those with a high school education or less (LaRochelle-Côté and Gilmore 2009).

The proportion of women age 20 to 29 with more than a high school education has increased substantially across the generations. In 2010, 83% of Generation Y women had more than a high school education, compared with 56% of late baby boomer women in 1986 (data not shown). Women with higher levels of education have higher employment rates and are more likely to work full time (Chung 2006).

Table 3 Average time spent on paid work for late baby boomers, Generation X and Generation Y at ages 20 to 29, by sex

	Late baby boomers		Generation X		Generation Y	
	Performed paid work on Diary Day	Average time on paid work	Performed paid work on Diary Day	Average time on paid work	Performed paid work on Diary Day	Average time on paid work
	%	hours: minutes	%	hours: minutes	%	hours: minutes
All men	57	5:02	57	5:18	51	4:35
Age						
20 to 24 (ref.)	52	4:32	47	4:24	49	4:07
25 to 29	62	5:31	67	6:08	53	5:03
Education						
High school diploma or less (ref.)	64	4:34	62	5:05	44	4:25
More than a high school diploma	53	5:40	56	6:07	53	4:37*
Lives with one or both parents						
Yes (ref.)	49	4:07	52	4:08	47	3:54
No	61	5:29	48	6:02*	57	5:32
Family status						
Single (ref.)	51	4:21	53	4:50	47	4:02
Married no children	63	5:41	70	6:31	62	5:51
Married with children	67	6:03	67	6:23	61	6:16
School attendance						
Student (ref.)	13	:51	18	1:09	18	:39
Not a student	66	5:49*	68	6:20*	59	5:29*
Immigrant status						
Immigrant (ref.)	62	5:45	49	5:01	45	3:59
Canadian-born	57	4:57	60	5:23	52	4:41
All women	45	3:38	49	4:01	43	3:32
Age						
20 to 24 (ref.)	44	3:27	49	3:57	42	3:25
25 to 29	46	3:48	48	4:04	44	3:39
Education						
High school diploma or less (ref.)	43	3:23	43	3:28	31	2:14
More than a high school diploma	47	3:50	51	4:11	45	3:48*
Lives with one or both parents						
Yes (ref.)	53	3:23	52	3:49	47	3:50
No	43	4:32	48	4:04	40	3:19
Family status						
Single (ref.)	53	4:31	53	4:14	46	3:52
Married no children	55	4:23*	64	5:35	58	5:02
Married with children	29	2:02*	29	2:20*	23	1:33*
School attendance						
Student (ref.)	13	:48	27	1:45	21	1:30
Not a student	50	4:05*	53	4:27*	49	4:03*
Immigrant status						
Immigrant (ref.)	52	3:30	38	3:21	35	3:09
Canadian-born	44	4:30	51	4:06	44	3:36

* statistically significant difference from the reference group (ref.) at $p < 0.05$

Note: For the population, time per day and participation rates are averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1986, 1998 and 2010.

Family-related variables had significant effects on the time women spent on paid work in 1986, 1998 and 2010, but not on that of men. The paid work hours for married men with children tended to be higher than those for single men and married men without children, whereas the opposite was true for women. After controls for other factors were included, married women with children did significantly fewer paid work hours than single women in each generation. Late baby boomer married women with no children did significantly less paid work than single women, but this was not the case for their Generation X and Y counterparts.

Generation Y mothers spent considerably less time per day at paid work (1 hour 33 minutes) than late baby boomers (2 hours 2 minutes) and Generation Xers (2 hours 20 minutes) even though, overall, the labour force participation rate of mothers with young children has increased steadily over the past two decades (Luffman 2006). The difference may be linked to changes in publicly insured paid leave and the incidence of having infants at home,⁶ thus increasing the chance of Generation Y women being on leave at the time of the survey. Generation Y women are entitled to up to one year of combined paid maternity and parental leave after birth, whereas when Generation X women were age 20 to 29, 6 months of paid maternity and parental leave were available, and for late baby boomer women it was 4 months of paid maternity leave.

Married women doing less housework and married men more

Similar to paid work, certain factors are associated with participation in and the average time spent on housework across generations for both men and women. Consistently, students and those who spent any time at a job on Diary Day did significantly less housework than non-students and those who did not do any paid work (Table 4). Generations X and Y men age 25 to 29 did significantly more housework than those age 20 to 24, as did those living on their own in 1986 and 2010.

On average, education level had less effect on men's involvement in housework than women's. After controls for other factors were taken into account, in 1986 and 2010 women with higher education did significantly less housework than women with a high school diploma. Although higher-income households (associated with higher levels of education) are more likely to hire domestic help (Marshall 2006), this activity is

not likely a factor in the differences found here. Only a small percentage of employed women age 20 to 29 were in households that purchased cleaning services (7% in 2010).⁷

Compared with being single, marriage and children significantly increase the average time spent on housework for men in Generation X and women in all generations. Although not significantly different from those not in a couple, Generation Y married men, with and without children, spent similar time on housework to Generation X men. Overall, the difference in housework time between men and women in couples has become progressively smaller with each passing generation. For example, in 1986, late baby boomer married women without children did 1 hour 6 minutes more housework work per day than married men without children, while, in 2010, Generation Y women did 19 minutes more than men.

But unlike paid work, there is an opposite trend for the average time spent on housework by sex, which shows increases in men's involvement in housework by all personal and demographic characteristics, and a steady decrease in women's. Averaged over the population, Generation Y men did 1 hour 1 minute of housework per day, which was up from 44 minutes for late baby boomers in 1986 and from 53 minutes for Generation X in 1998. Meanwhile, Generation Y women did 1 hour 26 minutes of housework per day, down from 1 hour 54 minutes for late baby boomers and 1 hour 47 minutes for Generation Xers.

Young men may be increasing their involvement in housework due to cultural expectations and socialization. Research has shown that married men who had grown up in households with an employed mother spend more time on housework than married men who did not have an employed mother (Gupta 2006). Furthermore, as noted previously, over the past two decades time spent on housework among teenage boys and girls has become more uniform (Marshall 2007).

Work patterns more similar in young dual-earner couples

The reduced difference in the time spent on housework between young adult men and women may also be linked to the change in paid work hours within all families. Dual earners have been the predominant family form since the 1980s, but women continue to increase their proportional contribution of paid work

Table 4 Average time spent on housework for late baby boomers, Generation X and Generation Y at ages 20 to 29, by sex

	Late baby boomers		Generation X		Generation Y	
	Performed housework on Diary Day	Average time on housework	Performed housework on Diary Day	Average time on housework	Performed housework on Diary Day	Average time on housework
	%	hours: minutes	%	hours: minutes	%	hours: minutes
All men	48	:44	69	:53	65	1:01
Age						
20 to 24 (ref.)	43	:31	65	:36	60	:44
25 to 29	54	:56	73	1:08*	70	1:17*
Education						
High school diploma or less (ref.)	47	:43	72	1:03	60	:57
More than a high school diploma	49	:44	68	:46*	65	1:12
Lives with one or both parents						
Yes (ref.)	38	:30	60	:38	59	:44
No	53	:50*	74	1:02	73	1:24*
Paid work on Diary Day						
None (ref.)	56	1:03	74	1:15	66	1:22
Less than 8 hours	53	:49*	67	:48*	75	:54*
8 or more hours	39	:23*	63	:32*	60	:36*
Family status						
Single (ref.)	44	:36	66	:40	62	:51
Married no children	52	:52	72	1:08*	73	1:25
Married with children	55	1:00	80	1:39*	71	1:30
School attendance						
Student (ref.)	37	:21	62	:31	61	:40
Not a student	50	:48*	70	:55*	65	1:04*
Immigrant status						
Immigrant (ref.)	48	:43	62	:45	53	:44
Canadian-born	48	:44	70	:51	67	1:04*
All women	78	1:54	86	1:47	76	1:26
Age						
20 to 24 (ref.)	73	1:32	83	1:30	68	1:06
25 to 29	84	2:16	88	2:02	83	1:46
Education						
High school diploma or less (ref.)	83	2:25	87	2:20	87	2:06
More than a high school diploma	74	1:28*	86	1:36	73	1:17*
Lives with one or both parents						
Yes (ref.)	58	:53	75	:59	64	:51
No	84	2:20	89	2:01*	84	1:54
Paid work on Diary Day						
None (ref.)	84	2:30	89	2:21	79	1:49
Less than 8 hours	77	1:40*	87	1:37*	79	1:22
8 or more hours	67	:53*	80	:57*	67	:42*
Family status						
Single (ref.)	61	:54	77	1:10	66	:51
Married no children	82	1:58*	91	1:55*	83	1:44*
Married with children	94	3:01*	94	2:43*	93	2:29*
School attendance						
Student (ref.)	59	:54	77	:54	66	:45
Not a student	81	2:02*	88	1:56*	78	1:35*
Immigrant status						
Immigrant (ref.)	73	1:28	76	1:31	67	1:14
Canadian-born	79	1:57	88	1:47	77	1:22*

* statistically significant difference from the reference group (ref.) at $p < 0.05$

Note: For the population, time per day and participation rates are averaged over 7 days

Source: Statistics Canada, General Social Survey, 1986, 1998 and 2010.

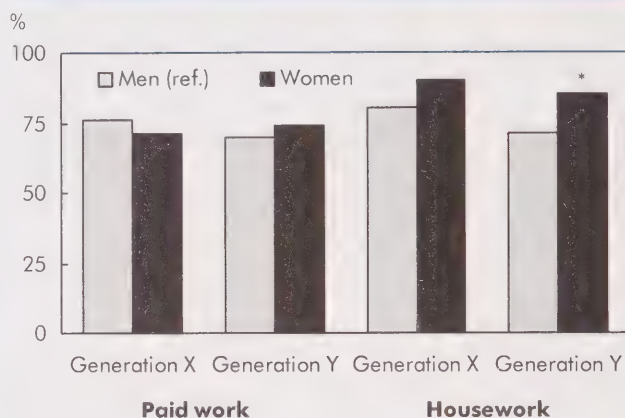
within such couples (Marshall 2009). In tandem, as women have increased their hours of paid work, men have steadily increased their share of household work, which may, in turn, be changing attitudes towards the division of labour.

Among young adults from Generations X and Y, only a minority were part of a couple and an even smaller proportion were part of a dual-earner couple.⁸ However, the populations of dual earners are nonetheless large enough to broadly examine the overall spousal contribution of paid work and housework hours.

Most dual-earner men and women from Generations X and Y reported participating in paid work and housework on Diary Day. In 1998 and 2010, the participation rate in paid work ranged from 70% and 76% for both sexes (Chart D). Since the participation rate was averaged over the week, the paid work rate was lower than that for housework since it is usually performed for a maximum of 5 days per week, while meal preparation or cleaning, for example, is often done daily. In both generations, women have a higher daily housework participation rate than men—with a 10 percentage point difference for Gen Xers in 1998 and a 14-point difference for Generation Y in 2010.⁹

In terms of average time spent on paid work, Generation X women in dual-earner couples did 6.4 hours per day in 1998 and Generation Y women did 6.7 hours in 2010 (Table 5). These 1998 and 2010 averages represent 48% and 47%, respectively, of the total

Chart D Daily participation in paid work and housework similar in dual-earner couples



* statistically significant difference from the reference group (ref.) at $p < 0.05$

Note: For the population age 20 to 29 in each generation, participation rates are averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1998 and 2010.

paid work time done by couples and, compared with another GSS time use study, are proportionally higher than what dual-earner women age 25 to 54 did in 1992 (45%) and 2005 (46%) (Marshall 2006).

Table 5 Average daily time spent on paid work and housework for individuals in a dual-earner couple at ages 20 to 29

	Paid work			hours	Housework			Wife's proportion	
	Both sexes	Men (ref.)	Women		Both sexes	Men (ref.)	Women	Paid work	Housework
Generation X	13.3	6.9	6.4		3.2	1.3	1.9*	48	59
No children at home	14.0	7.2	6.8		3.3	1.4	1.9	48	57
Has children	11.7	6.4	5.4		3.2	1.2	2.0	46	61
Generation Y	14.1	7.5	6.7		3.1	1.5	1.7	47	53
No children at home	13.5	6.5	7.0		3.2	1.7	1.5	52	48
Has children	14.1	9.0	5.1 ^{E*}		3.4	1.2	2.1 ^E	36	64

* statistically significant difference from the reference group (ref.) at $p < 0.05$

Note: For the population, time per day is averaged over 7 days.

Source: Statistics Canada, General Social Survey, 1998 and 2010.

On the other hand, women's time spent on housework, relative to the total time done by the couple, has fallen. Dual-earner women from Generation Y did 53% of the total housework done by couples, down from 59% for dual-earner Generation X women. Again, these proportions were smaller than those for dual-earner women age 25 to 54, who, in 2006, did 62% of the total housework done by the couple (Marshall 2006). However, similar to the findings for older dual-earner couples, when dependent children are present, women's contribution to a couple's total paid work time becomes smaller, while the proportional contribution to housework becomes larger.¹⁰

Conclusion

Major life events of young adults age 20 to 29 are generally the same from one generation to the next, but the timing of events can change. Overall, compared with late baby boomers (born from 1957 to 1966) and those in Generation X (1969 to 1978), those in Generation Y (1981 to 1990) were the least likely to be married or living common-law and have children. Those in Generation Y were also the most likely to be still living at home with at least one parent. Also, both Generations X and Y were more likely to be attending school than late baby boomers.

Despite the socioeconomic changes in the characteristics of the three generations, participation in and time spent on paid work has remained relatively stable—with about 50% working at a job on any given day and spending between 8.5 and 8.8 hours at work. In contrast, involvement in daily housework has increased over time (70% in 2010) but the time spent on it has declined—from 2.1 hours per day in 1986 to 1.7 hours in 2010. This trend in housework is a result of an increase in the percentage of men participating in housework and a decrease in the time women spend on it.

For all generations, students spent significantly less time on paid work than non-students. However, higher educational attainment was linked to more paid work for both men and women of Generation Y. Also, while children had no effect on men's paid work time, their presence significantly lowered the hours of paid work for women.

Factors associated with spending significantly less time on housework include being a student, doing paid work on Diary Day, and, for men, being younger and

living at home with at least one parent. Also, being in a couple, with or without children, significantly increased time spent on housework for men from Generation X and women from all three generations.

Progressively, from late baby boomers to those in Generation Y, there has been an increasing similarity in young men's and women's involvement in paid work and housework. However, despite the narrowing of the differences, compared with women, men continue to have an overall greater involvement in paid work and a lesser involvement in housework. For example, among late baby boomers, men spent 1.4 hours more per day on paid work than women, while Generation Y men did 1.1 hours more; late baby boomer women did 1.2 hours more housework per day than men and Generation Y women did 0.4 hours more.

An examination of men and women age 20 to 29 in dual-earner couples confirms the trend that spouses are increasingly sharing economic and domestic responsibilities. In 2010, dual-earner Generation Y women did 47% of couples' total paid work and 53% of couples' housework. However, also similar to past trends, having dependent children at home tends to alter the division of labour within young dual-earner couples.

Perspectives

Notes

1. The baby boom in Canada extended over a 20-year period and is often divided into two groups and described as the first and second wave, or the front and back end of the boom. For simplicity, this study refers to the second half of the boom as 'late baby boomers.'
2. For the remainder of this paper, the term 'married' refers to those who are married or living common-law.
3. The extent of the increase suggests a real social trend of young adults remaining at home longer and is consistent with 2006 Census findings, however, another factor may be involved (Milan et al. 2007). It is likely that the number of young adults living on their own is under-represented in the 2010 survey since many of them live in cell-phone-only households which are excluded from the sampling frame (see *Data source and definitions*).
4. Detailed ages of children are not available from the 1986 survey for late baby boomers.
5. Since the late 1990s, almost 50% of full-time postsecondary students age 15 to 24 were employed during the school year, up from 35% in 1985/1986 (Marshall 2010; Usalcas and Bowlby 2006).

6. Among Generation Y mothers, 59% had at least one child under the age of 2 at home compared with 46% of Generation X mothers (data not available for late baby boomers).
7. The sample size is too small to examine purchasing differences by level of education.
8. It is not possible to examine late baby boomers in dual-earner couples since the 1986 General Social Survey did not ask about the main activity of the respondent's spouse.
9. At 0.054, the probability value of the 1998 difference was close to the < 0.05 significance level.
10. Many of the differences in time spent on paid work and housework between men and women with children at home would likely be significant with a larger sample size. The estimates have relatively large coefficients of variation.

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Seniors returning to Canada

Kristyn Frank and Feng Hou

While emigration has traditionally been regarded as a ‘brain drain’ through which Canada permanently loses human capital, recent studies suggest that the nature of international migration is changing. Specifically, it is viewed as more circulatory than in the past, with many individuals leaving their home country with the intention of returning at some point in the future (Aydemir and Robinson 2006; Michalowski and Tran 2008; Zhang 2009a).¹

The characteristics of emigrants who return to Canada, and particularly the age at which they do so, may have social and economic implications. The return of younger emigrants is typically viewed as a reversal of the ‘brain drain,’ with many young emigrants “drawn from sectors thought to be important to Canada’s economy and society” (Zhao et al. 2000, p. 42). Research underscores the extent to which international networks and experience improve the labour market outcomes of younger emigrants upon their return to their home countries (Asia Pacific Foundation of Canada 2011; Finnie 2007; Fangmeng and Zhongdong 2006; Cervantes and Guellec 2002). Overall, younger returnees provide Canada with an inflow of individuals in their prime working years, many of whom have valued skills and experience.

The return of older emigrants raises different questions. Some research suggests that the income taxes paid by older returnees following a long-term stay abroad may not cover their subsequent health care costs (Asia Pacific Foundation of Canada 2011). Moreover, if there are more seniors returning to Canada than leaving, extra pressures may be placed on some public programs, like those that support low-income seniors. Nonetheless, the return of older emigrants may also provide benefits to Canadian society (see *Data sources and definitions*). Like younger returnees,

older returning emigrants may bring international experience and networks with them that are valued in the labour market, although the extent to which these are utilized will depend on employment rates at older ages. The return of older emigrants may also have social benefits related to the care of family members or volunteer activities, to cite two examples.

Given the range of implications associated with return migration at older ages, the number and characteristics of emigrants who return to Canada at later stages of life merit attention. Several questions are addressed in this article: Do seniors account for a large proportion of returned emigrants?; From where do older emigrants return?; Do the characteristics of older returned emigrants differ from those of older Canadians who did not live abroad?; Do the amounts and sources of income received in old age differ between these groups?

Returned emigrants are comprised of two distinct groups—those who are Canadian-born and those who immigrated to Canada prior to emigrating. The return of immigrants to Canada is of particular interest given higher levels of immigration in the 1990s and 2000s relative to previous decades and the increasingly fluid nature of migration.

Due to the unique and well-established migratory relationship between Canada and the United States, emigrants who return from the U.S. are also of particular interest. This is especially so given the introduction of North American Free Trade Agreement (NAFTA) visas in the 1990s. These visas allow Canadians to work in the U.S. for many years without the need to become permanent residents (Zhao et al. 2000).

Kristyn Frank and Feng Hou are with the Social Analysis Division. Kristyn Frank can be reached at 613-951-3962 or kristyn.frank@statcan.gc.ca. Feng Hou can be reached at 613-951-4337 or feng.hou@statcan.gc.ca.

Table 1 Population estimates by migration status and age group

	Returnees ¹		Stayers	
	Canadian-born	Immigrants	Canadian-born	Immigrants ²
'000				
1991				
Total	67.4	41.1	15,060.2	3,233.3
20 to 29	19.8	9.2	3,595.6	344.6
30 to 39	24.5	10.1	3,858.3	537.5
40 to 49	12.5	10.5	2,785.5	760.8
50 to 59	5.3	4.7	1,854.9	598.6
60 to 69	3.5	3.7	1,609.6	539.4
70 and over	1.8	2.9	1,356.3	452.4
1996				
Total	67.1	32.6	15,895.5	3,542.0
20 to 29	17.5	6.7	3,242.7	328.6
30 to 39	25.9	8.1	4,000.0	587.5
40 to 49	13.1	7.6	3,350.6	812.4
50 to 59	5.7	4.5	2,110.8	688.6
60 to 69	3.2	3.2	1,627.6	566.6
70 and over	1.6	2.5	1,563.8	558.4
2001				
Total	71.4	51.2	16,648.1	4,031.2
20 to 29	19.7	9.8	3,174.1	341.0
30 to 39	24.3	13.7	3,532.2	669.2
40 to 49	14.6	11.1	3,798.6	840.5
50 to 59	7.2	8.1	2,679.3	870.6
60 to 69	3.5	5.1	1,689.4	632.2
70 and over	2.0	3.5	1,774.5	677.7
2006				
Total	98.3	57.3	17,551.4	4,570.1
20 to 29	24.1	10.6	3,280.9	397.2
30 to 39	33.6	13.5	3,093.5	634.2
40 to 49	19.6	13.4	3,933.7	973.4
50 to 59	12.0	9.7	3,285.9	998.9
60 to 69	5.9	6.2	1,978.7	745.7
70 and over	3.1	3.9	1,978.8	820.6

1. Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

2. Arrived in Canada more than 5 years before the census.

Source: Statistics Canada, Census of Population, 1991, 1996, 2001 and 2006.

Senior returnees are a small portion of return emigrants

In 2006, just under 156,000 individuals age 20 or older returned to Canada after having lived abroad 5 years earlier (Table 1). In proportional terms, this group accounted for 0.7% of all Canadians age 20 or older. In 1991 and 1996, between 100,000 and

110,000 individuals returned to Canada after having lived abroad 5 years earlier, accounting for 0.5% to 0.6% of the population. Of the returnees identified in 2006, about two-thirds (63%) were Canadian-born and about one-third were immigrants. The share of returnees who were Canadian-born ranged from 58% to 67% in previous census years, with no clear trend over time.

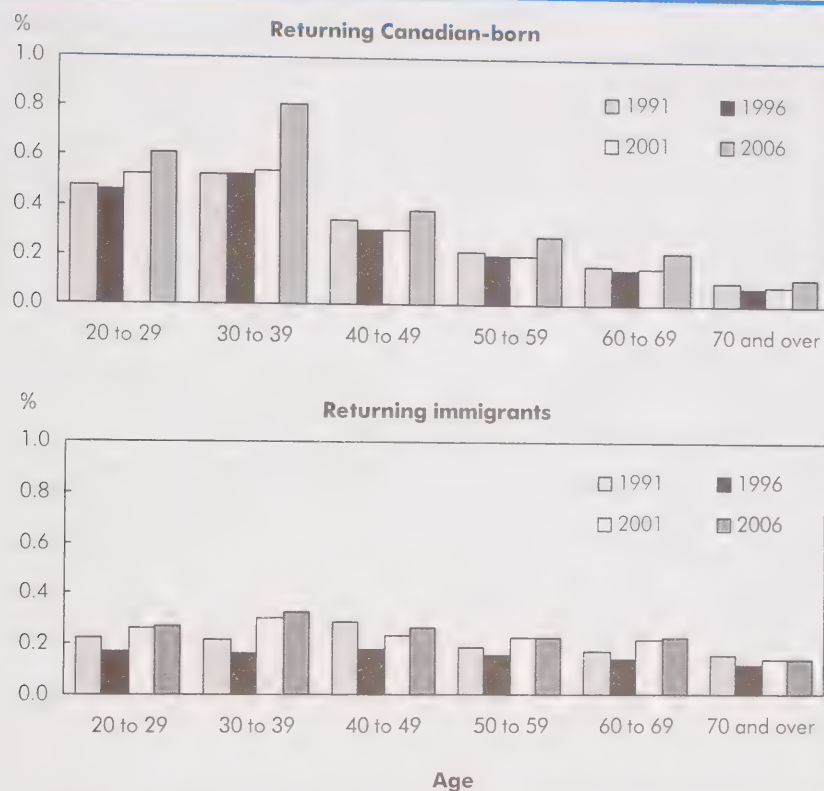
In 2006, as in previous census years, most returnees were young, with about one-half between the ages of 20 and 39 and three-quarters between the ages of 20 and 49. In contrast, 13% of returnees were age 60 or older, accounting for about 19,000 individuals. There was an observable difference between Canadian-born and immigrant returnees in this regard. While 9% of Canadian-born returnees were age 60 or older, this was the case for 18% of immigrant returnees. In absolute terms, there were about 9,000 Canadian-born returnees age 60 or older and about 10,000 immigrant returnees in this age group in 2006.

Within age groups, Canadian-born and immigrant returnees comprise a small share of the Canadian population. In 2006, returnees accounted for 0.9% and 1.1% of the population age 20 to 29 and 30 to 39, respectively (Chart A). These were larger shares than in older age groups. This may be associated with the fact that younger individuals leave in greater numbers and the rate of return is highest within a few years of emigration (Finnie 2007). The high rate of mobility among younger age groups is typically due to employment or educational opportunities abroad and fewer constraints, like spousal jobs or home ownership. In 2006, returnees accounted for 0.4% and 0.2% of the population age 60 to 69 and 70 or older, respectively.

Older returnees possess higher levels of education than stayers

Senior returnees differ from stayers in several ways. Canadian emigrants are more highly educated than the general population and returnees would thus also be expected to have relatively high

Chart A Returning Canadian-born and immigrants as a percentage of total population of Canada by age group



Note: Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

Source: Statistics Canada, Census of Population, 1991, 1996, 2001 and 2006.

levels of education (DeVoretz 2009a; Michalowski and Tran 2008; Zhao et al. 2000). This is indeed the case. In 2006, about one-third of Canadian-born and immigrant returnees age 60 or over had a university degree compared with 10% to 14% of stayers in this age group (Table 2).

Across all age groups, migration patterns differ between Canadian women and men, with men more likely to emigrate from Canada and more likely to return after leaving (DeVoretz 2009b; Finnie 2006). Among seniors in 2006, women accounted for 49% to 50% of returned emigrants, but for 53% to 55% of stayers in the Canadian population.

Dual citizenship reduces barriers to living abroad, like eligibility to take employment elsewhere, and is associated with being a returned emigrant (DeVoretz 2009a). Almost 10% of older Canadian-born returnees held dual citizenship in 2006 compared to less than 1% of Canadian-born stayers. At just over 20%, immigrant returnees had the highest level of dual citizenship—almost double the proportion of immigrant stayers.

Data sources and definitions

This study uses data from the 20% sample of the four Canadian censuses from 1991 to 2006, with a particular focus on results from the 2006 Census. Multiple years of data and large sample size allow for an examination of trends over time and provide insight into the size and characteristics of Canada's senior returnee population. U.S. Census data (2000) are also used to estimate the number of Canadian-born individuals residing in the United States in 2000.

Census long-form respondents provided information on their country of residence 5 years earlier, allowing individuals who returned to Canada since that time to be identified. Canadian-born returnees are defined as those who were born in Canada, lived abroad 5 years prior to the census, and were back in Canada at the time of the census. Immigrant returnees are defined as those who were born in a foreign country and immigrated to Canada, lived outside of Canada

5 years prior to the census, and were residing in Canada again at the time of the census. Returnees are also referred to as 'returned emigrants' throughout the article. Immigrants and Canadian-born individuals who lived in Canada 5 years prior to the census are identified as 'stayers.' The analysis is limited to individuals age 20 or older, thereby excluding children and youth who moved with their parents. The terms 'senior' and 'older' Canadians refer to individuals age 60 years or older, unless otherwise specified.

Note that returnees identified in each census are a subset of all returnees in the population. This is because individuals who moved abroad and returned to Canada within the 5 years prior to the census cannot be identified. Individuals who returned to Canada more than 5 years prior to the census also cannot be identified.

Table 2 Demographic characteristics by migration status, age 60 and over

	Returnees ¹		Stayers	
	Canadian-born	Immigrants	Canadian-born	Immigrants
	%			
Woman	49.2	49.5	54.7	53.0
Married	63.3	65.7	62.9	66.9
Education				
Less than high school graduation	17.2	23.9	39.1	36.4
High school diploma	27.8	25.1	33.9	32.1
Some postsecondary	21.7	20.4	16.7	17.4
University degree	33.3	30.6	10.4	14.1
Citizenship				
Canadian citizenship	90.6	59.1	99.8	80.1
Dual citizenship	9.4	20.5	0.2	10.8
Not Canadian citizen	0	20.4	0	9.2
Live in owned home	71.4	69.9	76.2	81.2
Living arrangement				
Live alone	29.2	20.3	29.8	21.6
With spouse only	51.9	39.2	52.5	43.6
With spouse and others	9.6	23.5	9.8	22.3
With others	9.2	17.1	7.9	12.5
Geographic distribution				
The three largest CMAs ²	26.0	54.3	22.3	54.0
Large metropolitan areas	16.4	15.1	15.2	14.9
Other metropolitan areas	20.0	15.6	17.9	15.0
Small urban areas	13.9	6.9	17.2	7.8
Non urban areas	23.7	8.1	27.4	8.2

1. Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

2. Montréal, Toronto and Vancouver.

Note: Statistical significance is not marked individually in the table because comparisons can be made in various ways. Given the sample size of the groups used in the study, a difference of 3 percentage points or more is statistically significant at $p < 0.05$.

Source: Statistics Canada, Census of Population, 2006.

Due to their time abroad, senior returnees may be less likely to own their homes after returning to Canada. Although the majority of Canadian-born and immigrant returnees lived in owned homes in 2006, home ownership was higher among stayers.

Most older Canadian-born returnees lived with their spouse only (52%), similar to Canadian-born stayers. A smaller percentage

of immigrant returnees lived with a spouse only, while about one-fifth lived alone. The data also indicate that senior immigrant returnees are more likely than stayers to reside with their extended families, as 17% live with others only.

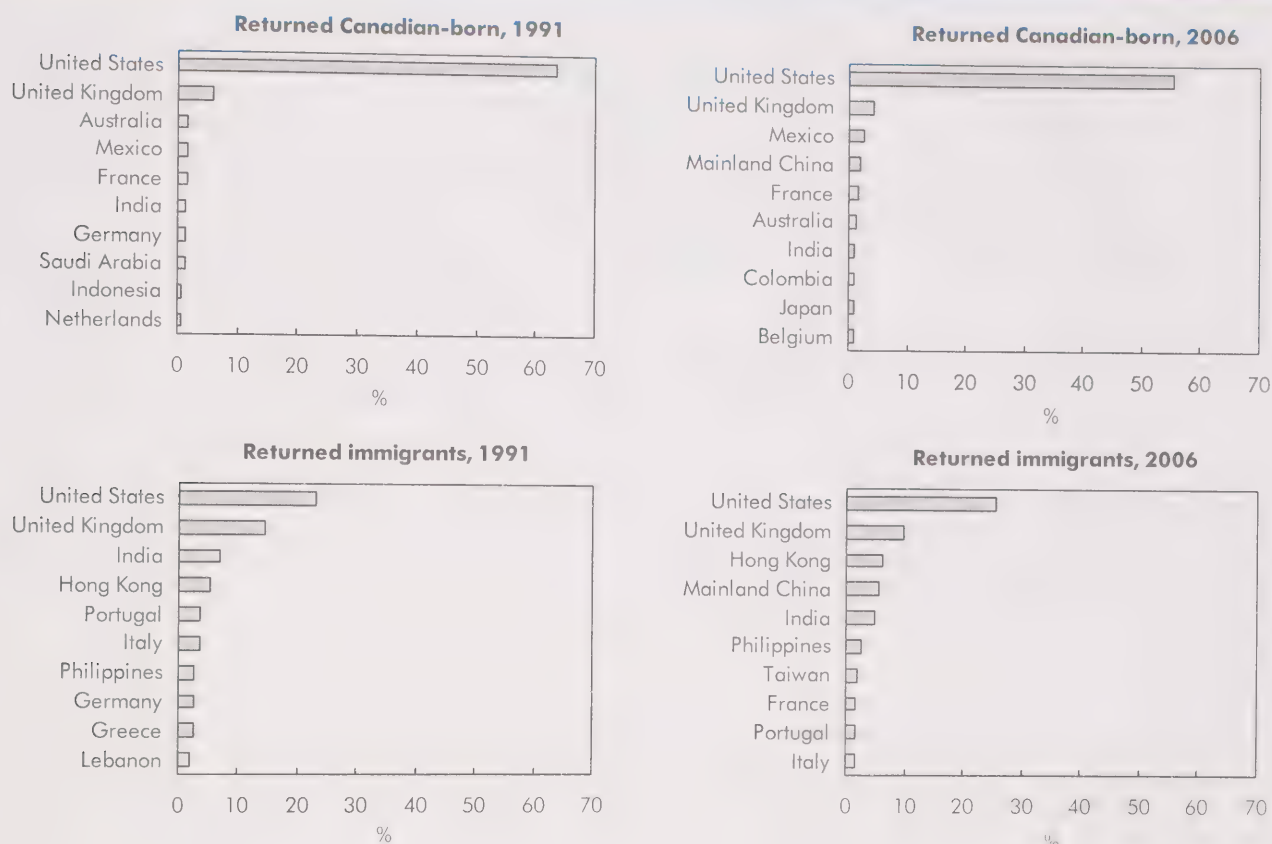
Finally, immigrants to Canada primarily settle in the largest population centres while Canadian-born individuals are more evenly distrib-

uted across large and small communities (Bernard 2008). The same pattern was noted among the returnee population. Similar to Canadian-born stayers, older Canadian-born returnees were fairly evenly distributed with respect to the size of community in which they lived. Older immigrant returnees were twice as likely as their Canadian-born counterparts to live in the census metropolitan areas of Montréal, Toronto or Vancouver and one-third as likely to live in non-urban areas.

Older emigrants primarily lived in the United States prior to returning to Canada

The United States has long been the top destination for Canadian emigrants (Easton et al. 2005; Michalowski and Tran 2008). DeVoretz (2009a) estimates that approximately 40% of all Canadians abroad reside in the U.S. While the United States is considered a 'traditional' destination for Canadian emigrants, some evidence suggests that an increasing share of Canadian emigrants is relocating to non-traditional nations, particularly countries in Asia (Dion and Vézina 2010). Although the source countries for older returnees were more varied in 2006 than in 1991, the top two remained the United States and the United Kingdom (Chart B). Indeed, the majority of older Canadian-born returnees resided in the U.S. 5 years prior to the 2006 Census.

Migration to the United States reflects its geographic proximity to Canada, as well as the strong economic ties and cultural and linguistic similarities between these countries (Michalowski and Tran 2008; Mueller 2006). A number of the remaining top source countries

Chart B Top source countries of returned emigrants age 60 and over

Note: Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

Source: Statistics Canada, Census of Population, 1991 and 2006.

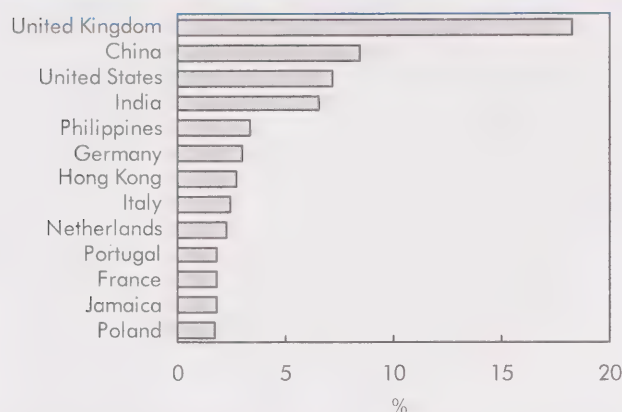
for Canadian-born returnees are also nations that are either geographically close to Canada (e.g., Mexico) or culturally and economically similar (e.g., United Kingdom, Australia, France).

Nonetheless, the proportion of senior Canadian-born returnees who resided in the United States, and to a lesser extent in the United Kingdom, decreased between 1991 and 2006, again pointing to the importance of non-traditional

countries as emigrant destinations. Among immigrants age 60 or older who returned to Canada, the majority had resided in countries other than the U.S. or the U.K. 5 years earlier, although both countries were the two top sources of immigrant returnees. Hong Kong, mainland China and India were the other major sources.

In some cases, differences observed between 1991 and 2006 likely reflect changing circumstances

in immigrants' home countries. For example, the relatively high placing of Hong Kong as a source country for senior immigrant returnees in both 1991 and 2006 follows a large influx of immigrants to Canada in the 1980s—just prior to the former British colony's integration into China (Aydemir and Robinson 2006; Zhang 2009b). The rapid growth and international integration of the Chinese economy is also evident, as China was not among the top 10 source countries in 1991

Chart C Top birth countries of immigrant returnees age 60 and over

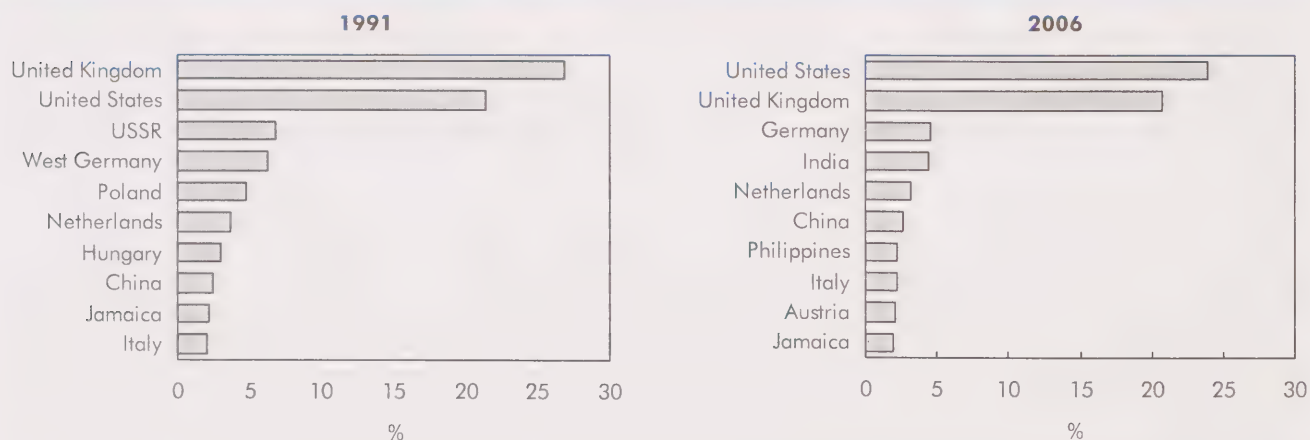
Note: Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

Source: Statistics Canada, Census of Population, 2006.

but was the fourth largest source country for both Canadian-born and immigrant senior returnees in 2006.

While the United States and the United Kingdom are the countries from which many older emigrants return, they are often not the countries in which immigrant returnees were born. Most notably, while 26% of older returned immigrants resided in the U.S. 5 years prior to their return to Canada, only 7% were born in the U.S. Quite clearly, some immigrants are not moving back to their country of birth when they leave Canada. The top birth countries of older returned immigrants are the United Kingdom, China, the United States and India (Chart C).

With regard to older immigrants who returned from the United States, most were born in that country but many were also born in the United Kingdom, and, to a lesser extent, Germany, India, the Netherlands and China (Chart D).

Chart D Top birth countries of immigrant returnees age 60 and over who lived in the United States

Note: Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

USSR Union of Soviet Socialist Republics

Source: Statistics Canada, Census of Population, 1991 and 2006.

Table 3 Canadians who lived in the United States and returned Canadians from the U.S. by age group

Canadian-born who lived in the U.S., 2000		Returned Canadian-born who lived in the U.S. 5 years ago, 2006	
	number		% returned
Total	873,700	Total	45,700
15 to 24	75,800	20 to 29	9,000
25 to 34	123,500	30 to 39	15,700
35 to 44	173,200	40 to 49	10,000
45 to 54	140,300	50 to 59	6,000
55 to 64	112,600	60 to 69	3,300
65 and over	248,300	70 and over	1,700

Sources: U.S. Census Bureau, Census 2000; Statistics Canada, Census of Population, 2006.

Small rates of return for Canadian-born seniors in U.S., but those who return are more highly educated

Return rates of emigration from the United States can be estimated using Canadian and U.S. census data (Table 3). While return rates for Canadian-born returnees can be estimated, an examination of Canadian immigrants who return from the U.S. would only include those who were living in Canada in 1995 and residing in the U.S. in 2000. Thus, this analysis focuses on Canadian-born emigrants.²

Only a small percentage of older Canadian-born emigrants residing in the United States in 2000 returned to Canada in the 5 years prior to 2006. While about 12% to 13% of Canadian-born emigrants age 20 to 39 returned to Canada in the 5 years prior to 2006, about 3% of those age 60 to 69 and less than 1% of those age 70 or over did so. Overall, about 1 in 10 Canadian-born emigrants who returned from the U.S. in 2006 was 60 or over.

Canadian-born seniors who return to Canada from the U.S. often have high levels of educational attainment. Of those who returned between 2000 and 2006, almost 30% had a university degree com-

pared with about 20% of all Canadian-born emigrants (age 60 or over) who resided in the U.S. in 2000 and 10% of Canadian-born seniors who resided in Canada from 2000 to 2006 (data not shown).

Older returnees concentrated in professional and managerial occupations

The high level of educational attainment among returnees is one reason to ask whether their employment rates and labour market outcomes differ from those of the general population. For example, emigrants' high levels of education may be reflected in higher earnings and a greater likelihood of working in skilled jobs (Michalowski and Tran 2008). Similarly, returned immigrants may be disproportionately represented

Table 4 Labour force activity by migration status, age 60 and over

	Returnees ¹		Stayers	
	Canadian-born	Immigrants	Canadian-born	Immigrants
	%			
Unemployed	2.2	2.3	1.1	1.0
Employed	23.5	22.8	19.5	20.3
Not in labour force	74.3	74.9	79.4	78.7
Occupation among employed²				
Management	19.9	11.0	11.2	12.6
Professional	35.1	34.4	15.9	19.7
Technical, paraprofessional	20.8	23.3	32.2	30.6
Intermediate occupations	18.0	20.1	29.7	25.4
Labouring and elemental	6.2	11.2	11.0	11.7

1. Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census

2. The occupational groupings are based on the skill levels defined by the National Occupational Classification (NOC)

Source: Statistics Canada, Census of Population, 2006

in professional occupations due to high emigration among those who arrived under the skilled worker and business classes (Dryburgh and Hamel 2004). In addition, returned emigrants may be more likely to participate in the labour force upon their return to Canada for financial reasons, since Canada Pension Plan and Quebec Pension Plan benefits are based on the duration and level of contributions paid (Elgersma 2010).

Among those age 60 and over, returnees have higher employment rates than stayers. Among Canadian-born individuals there is a 4 percentage point difference between these groups, while among immigrants there is a 2.5 percentage point difference (Table 4). Canadian-born returnees have the highest employment rate of the 4 groups identified. Senior returnees are also more likely than stayers to be actively looking for work (i.e., to be unemployed).

Among individuals age 60 or over who are employed, returnees are far more likely than stayers to be working in managerial or professional occupations. Indeed, the majority of Canadian-born returnees (55%) work in these two broad occupational categories compared with 27% of Canadian-born stayers. A large difference is also evident between immigrant returnees and stayers (45% and 32% respectively).

Returnees age 60 and over receive less government transfers than other older Canadians

Individuals who emigrate from Canada typically have higher levels of income than others (Finnie 2006), corresponding to their higher levels of education. There-

fore, returnees could be expected to have higher average incomes than those who remained in Canada. On the other hand, income from government transfers may be lower among returnees than among stayers because of residence and contribution requirements. Furthermore, recent research indicates that Canadian-born returnees have better economic outcomes than immigrant returnees (Asia Pacific Foundation of Canada 2011).

In 2005, senior Canadian-born returnees had a higher average total income (\$43,800) than Canadian-born stayers (\$31,900)

(Table 5). This was due to market incomes that were, on average, about \$15,000 higher among Canadian-born returnees than stayers. In contrast, average income from government transfers was lower among returnees. The income gap between Canadian-born returnees and stayers was particularly pronounced among those age 60 to 69 (data not shown).

Comparing senior immigrant returnees and stayers, total average incomes differed by less than \$1,000, reflecting the offsetting differences of higher market incomes but lower government transfers among the former.

Table 5 Average income and source by migration status, age 60 and over, 2005

	Returnees ¹		Stayers	
	Canadian-born	Immigrants	Canadian-born	Immigrants
	\$			
Total income	43,800*	30,700	31,900	31,400
Income tax paid	9,100*	4,900	5,300	5,100
Market income	37,000*	23,700	21,700	21,300
Wages and salaries	12,700*	9,100	7,100	8,800
Self-employment income	2,500*	1,900	1,100	1,300
Investment income	5,600*	4,000	3,300	3,500
Retirement income	13,900*	7,400	9,200	6,900
Government transfers	6,800*	7,000*	10,200	10,100
CPP/QPP	3,100*	2,600*	4,800	4,200
OAS and GIS	3,000*	3,500*	4,600	4,900
Other social transfers	700*	1,000	900	1,000
	%			
Low-income rate ²	17.2*	24.2*	13.5	15.7

* indicates statistical significance at $p < 0.05$ between returnees and stayers. The differences between Canadian-born and immigrant returnees are significant with the exception of self-employment income, investment income and total government transfers.

1. Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

2. Statistics Canada's low-income cut-offs (LICOs, 1992 base, after government transfers and before income taxes) are used to determine low-income status. A person is defined as low income if her/his economic family income is below the LICO.

CPP Canada Pension Plan

QPP Quebec Pension Plan

OAS Old Age Security

GIS Guaranteed Income Supplement

Source: Statistics Canada, Census of Population, 2006.

Despite higher or comparable total incomes among returnees, they were more likely than stayers to experience low income in 2005. In fact, among older immigrant returnees, nearly one-quarter fell into low income compared with 17% of Canadian-born returnees, 16% of immigrant stayers and 14% of Canadian-born stayers.

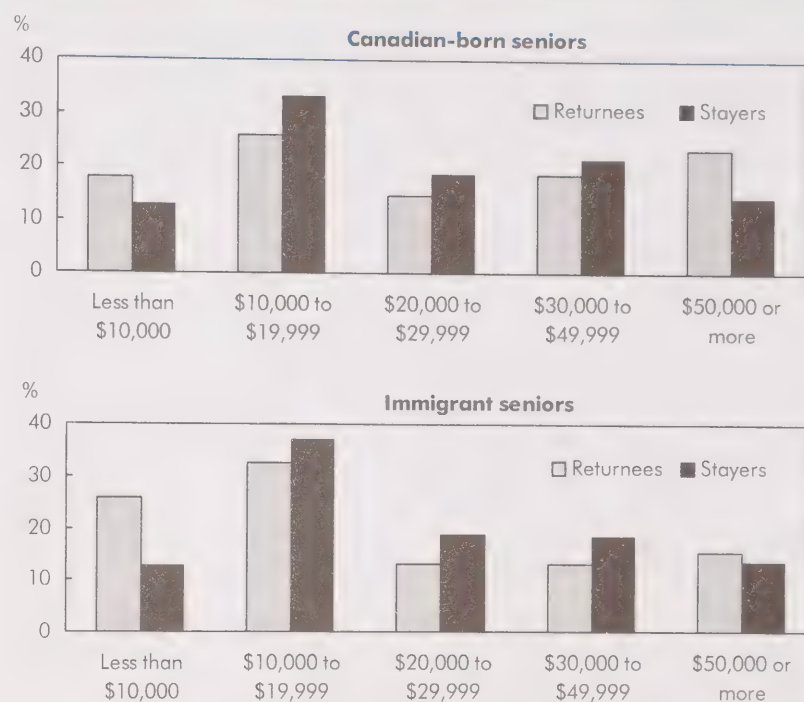
The higher average income and higher incidence of low income among older Canadian-born returnees is reflected in their distribution across personal income categories. As shown in Chart E, larger shares of older Canadian-born returnees than stayers had personal incomes of less than \$10,000 or \$50,000 or more in 2005. This more polarized distribution of income underlies the differences in average income and low-income rates. Larger shares of older immigrant returnees than stayers had personal incomes below \$10,000, reflected in their incidence of low income.

Government transfers comprised far less of older returnees' total incomes than stayers in this age group. This is particularly true for Canadian-born returnees—over 80% of their total income came from market income. A slightly smaller share of returned immigrants' incomes came from wages and salaries, self-employment income, and investment or retirement income. In comparison, government transfers accounted for nearly one-third of the incomes of senior stayers.

Conclusion

Although this study was motivated by the potential impact of returning senior emigrants, census data show that it is younger, primarily

Chart E Distribution of seniors by total income



Note: Returnees include the Canadian-born and long-term immigrants who lived in Canada at the time of the census but in another country 5 years before the census.

Source: Statistics Canada, Census of Population, 2006.

Canadian-born, emigrants who return to Canada in larger numbers. In fact, returnees age 60 and over comprise a small percentage of all returnees and represent a minute share of Canada's senior population. Overall, emigrants who return to Canada are mainly in their prime working years.

Senior returnees most frequently returned from the United States or the United Kingdom. However, there has been a shift in the top countries from which Canadians return, with an increasing share returning from developing countries—particularly China. Among

those who left Canada to reside in the U.S., younger Canadian-born emigrants return to Canada at higher rates than senior Canadian-born emigrants.

The settlement patterns of Canadian-born and immigrant returnees were very different. Older immigrant returnees were twice as likely as their Canadian-born counterparts to live in 1 of the 3 major CMAs and one-third as likely to live in non-urban areas.

Seniors who return to Canada are a highly educated group. One-half of them have at least some

postsecondary education and about one-third have a university degree. Moreover, they have a higher rate of employment than stayers and often work in professional and managerial jobs.

Older Canadian-born returnees earned higher average market and total incomes than stayers. Returnees age 60 and over also drew less income from government transfer payments than stayers in this age group. In particular, Canadian-born and immigrant returnees received lower transfer payments from the Canada Pension Plan and Quebec Pension Plan than stayers, with immigrant returnees receiving the smallest amount. Returnees also received smaller Old Age Security and Guaranteed Income Supplement payments than those who remained in Canada. Despite their higher average incomes, older returnees, particularly immigrants, were more likely to fall below low-income thresholds than stayers, reflecting the skewed distribution of income among this group.

Perspectives

■ Notes

1. Between 1980 and 2009, the number of emigrants age 20 to 59 fluctuated. Estimates show that 26,600 individuals age 20 to 59 emigrated in 1980, and by 2009 there were 37,100 emigrants in this age group (Statistics Canada 2011). General trends for emigrants age 60 and over indicate relatively consistent growth over time: estimates indicate that emigrants age 60 and over grew from 1,900 in 1980 to 4,400 in 2009.
2. An analysis of Canadian immigrants who resided in the United States in 2000 and returned to Canada by 2006 indicates that there is no clear pattern in the return-migration rate by age. A greater proportion of 60- to 69-year-old immigrants returned to Canada by 2006 than immigrants in younger age groups for this population. Across all age groups of foreign-born emigrants who returned to Canada from the U.S., those age 20 to 29 represented the lowest proportion of returnees, followed by those age 40 to 49 and 70 years and over.
3. Similar results are also found for the immigrant population that returned from the U.S. by 2006. While about 30% of the immigrant population living the U.S. in 2000 held university degrees, more than 40% of immigrants who returned to Canada had a university-level education.

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We welcome your views on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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Factors associated with voting

Sharanjit Uppal and Sébastien LaRochelle-Côté

Voting is one of the most fundamental aspects of civic engagement. Many political scientists link voting with the health of the democratic process and argue that declining voting rates may be symptomatic of a “democratic deficit” (Pammett and LeDuc 2003; Nakhaie 2006). Because political participation can also influence public policy, others are concerned that lower participation could result in policies that are not necessarily representative of key constituencies, like those who tend to vote less (Archer 2003). As a result, the voter turnout rate is used as one indicator of civic engagement.

In Canada, studies on voter turnout have been based on a number of survey and administrative data sources. Examples include the Equality, Security and Community Survey, last conducted in 2002/2003 (Bevelander and Pendakur 2007) and the Canadian Election Study, conducted after most elections since 1965 (Blais et al. 2004; Adsett 2003). Elections Canada has also provided estimates of voting patterns by age group and province based on the official ballot count for every election since 2004 (Elections Canada 2010).

At Statistics Canada, the first survey covering voting participation was the 1997 Canada Survey of Giving, Volunteering and Participating (CSGVP). The CSGVP asked about voting again in 2001 (Nakhaie 2006), but not in subsequent versions of the survey. Information on voting continued to be collected in General Social Survey cycles on civic engagement in 2003 and 2008 (Milan 2005). Studies based on these sources have shown that some groups—including the young, the less-educated, and the less-wealthy—consistently vote less than others.

Recently, questions on voting in the 2011 federal election were included as a supplement to the Labour Force Survey (LFS) (see *Data source and definitions*). This

initiative was sponsored by Elections Canada in order to link the LFS’s large sample size and wide range of sociodemographic and labour market information with voting behaviour. For the first time in a Statistics Canada survey, respondents who said that they didn’t vote were also asked about their reasons for not voting.¹ The LFS voting questions therefore present an opportunity to cast new light on the factors associated with voting. Also, the large sample size of the LFS allows the study of voting in conjunction with detailed characteristics—something that cannot be examined with smaller surveys.

This article examines the factors associated with voting in the May 2011 federal election. In addition to cross-tabulations, it uses multivariate models to estimate which groups were more likely to vote, holding other factors constant. Changes over time and comparisons with participation in other countries are also briefly discussed (see *Changes in participation rates and International comparisons*).

Turnout rates

After each federal election, Elections Canada calculates the official turnout rate as the number of ballots cast divided by the total registered population.² In May 2011, approximately 14.8 million of the 24.3 million citizens on the electoral list cast a ballot, for a turnout rate of 61%. Provinces with higher-than-average voting rates included Prince Edward Island (73%), New Brunswick (66%), Saskatchewan (63%) and Quebec (63%). Those with lower rates included Newfoundland and Labrador (53%), Alberta (56%) and Manitoba (59%). Ontario, British Columbia and Nova Scotia had turnout rates close to the national average.

Sharanjit Uppal and Sébastien LaRochelle-Côté are with the Labour Statistics Division. Sharanjit Uppal can be reached at 613-951-3887 or sharanjit.uppal@statcan.gc.ca. Sébastien LaRochelle-Côté can be reached at 613-951-0803 or sebastien.larochellecote@statcan.gc.ca.

Voter turnout can be defined in different ways. Alternative definitions of turnout include the number of ballots cast divided by the total population 18 years and over, and the number of ballots cast divided by the total *citizen* population 18 years and over. The first of these alternatives can be interpreted as the proportion of voters in the ‘voting-age population,’ but may be skewed downward because some individuals who are not citizens and who do not have the right to vote would be included in the denominator. The second alternative—the proportion of voters among the citizen population—can be interpreted as a ratio of the eligible population, and is generally seen as a better measure of electoral participation since it includes all individuals who are legally eligible to vote, including those who do not appear on the electoral list. In 2011, the participation rate as a proportion of the citizen population reported by Elections Canada was 59%. Since the citizen population is the best approximation of those who are legally eligible to vote, most of the rates presented in this paper are expressed as ratios of voters to the citizen population.

An issue recognized in voting participation studies is that voting rates estimated by surveys are typically higher than the official turnout rates, and the LFS is no exception. One reason for this is that non-voters are

much less likely to answer survey questions on voting (Bauman and Julian 2010). But even after accounting for the fact that non-participants are more likely to be non-voters, the overall participation rate estimated by the LFS is 67%—as opposed to a turnout of 59% when the number of ballots cast is expressed as a share of the citizen population (see *Data source and definitions*). This suggests that unobserved factors account for the difference in voting rates between survey and administrative results. ‘Social desirability’—best described as the tendency of respondents to answer questions in a manner that will be viewed favourably by others—could be one of these factors. In other words, some non-voters could have said that they voted since voting is viewed as more socially acceptable than not voting (Holbrook and Krosnick 2010). That said, differences between key age groups and provinces are generally similar between administrative and survey data (see *Data source and definitions*).³

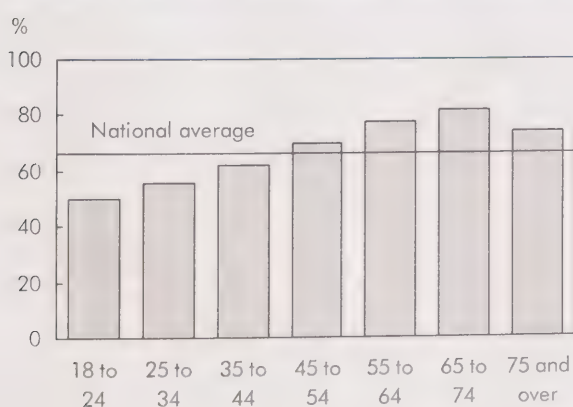
In addition to geographical differences, voting patterns can differ across age, sex, education, family status, immigration status, and employment-related variables. These factors and their participation in the most recent federal election are discussed in the next section.

Age, education and family status

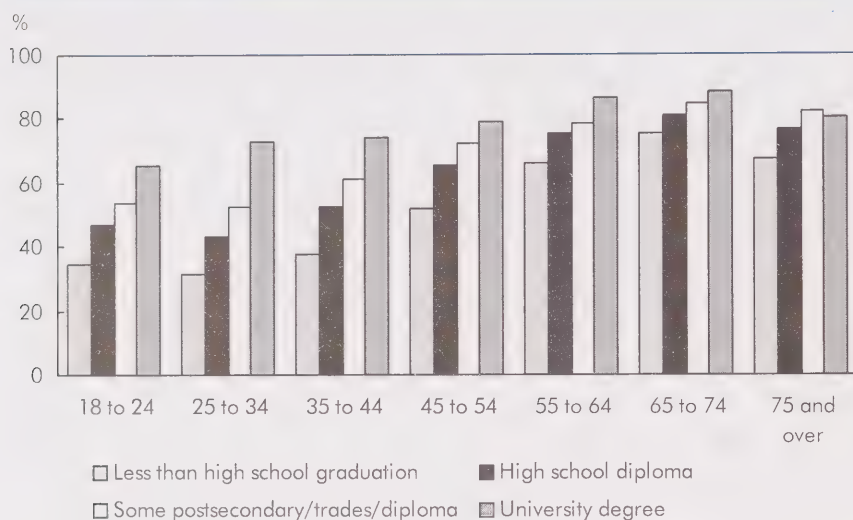
Age has been found to matter a great deal when it comes to voting participation. In 2011, the turnout rate was about 50% among people age 18 to 24, and was only a few percentage points higher among 25- to 34-year-olds (Chart A). People age 35 to 44 had participation rates just below the national average. In contrast, older people were more likely to vote, with turnout rates increasing from 70% among 45- to 54-year-olds to a peak of 82% among those age 65 to 74. The rate dropped after age 74, a pattern also seen in Election Canada’s administrative data (Elections Canada 2010)⁴ and in the most recent U.S. presidential election (U.S. Census Bureau 2010). Health could be a factor for this age group, as 44% of non-voters at least 75 years of age cited illness or disability as a reason for not voting (Statistics Canada 2011).

The link between education and voting is also well-established (Blais et al. 2004; U.S. Census Bureau 2010). In the last federal election, the voting rate among people with a university degree was 78%, compared with

Chart A Voting rates by age



Source: Statistics Canada, Labour Force Survey, May 2011.

Chart B Voting rates by age and education

Source: Statistics Canada, Labour Force Survey, May 2011.

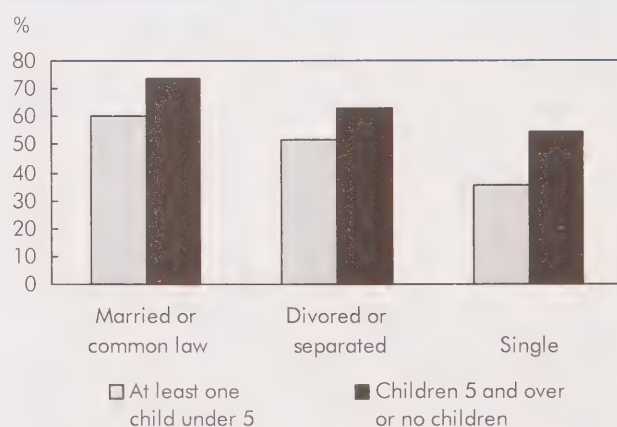
rates of 60% or lower among those with a high school education or less. What may be less well-known is that the 'positive' effect of education on voting was much stronger among younger individuals (Chart B).⁵ For instance, among people age 25 to 34, the difference in participation between those who had at least a bachelor degree and those with less than a high school education was 42 percentage points.⁶ Large differences between university graduates and those with less than a high school education were also seen among 35- to 44-year-olds and 45- to 54-year-olds. These differences narrowed after age 55, but were still significant as participation rates between the university-educated and the least-educated differed by at least 10 percentage points. The implication is that among those with a university education, differences across age groups are much smaller. The weaker link between education and voting among older individuals also supports the view that older generations get more involved in elections, even if they have lower levels of educational attainment (Blais et al. 2004).

Another potentially important factor is the family status of prospective voters. One motivation for examining family status is that many non-voters cited a busy schedule as a reason for not voting, particularly among

25- to 34-year-olds (who are more likely to be in the early stages of parenthood), but also among 35- to 44-year-olds (Statistics Canada 2011). Thus the ability to account for the number of children is an important attribute of the LFS. The presence of children was negatively associated with 2011 voting in all family types—particularly among single parents, as only 36% of single parents of children under 5 years of age voted compared to 60% of couples with children the same age (Chart C).⁷

Immigration status

Eligible immigrants have been shown to vote less than others in some studies (U.S. Census Bureau 2010; Milan 2005). Various reasons have been put forward to explain

Chart C Voting rates by marital status

Source: Statistics Canada, Labour Force Survey, May 2011.

this, including the lack of democratic traditions in some regions of the world, the lack of trust in institutions or differences in political culture (Bevelander and Pendakur 2007 and 2009). Differences in voting

patterns across sub-groups of immigrants are not often reported due to small sample sizes. With the LFS, however, differences between recent immigrants, more established immigrants, and the Canadian-born can be studied, as well as differences across immigrants' regions of birth.

Compared with more established immigrants and the Canadian-born, recent immigrants (those who immigrated to Canada in 2001 or later) were less likely to vote (Table 1). The voting rates were 51% for recent immigrants, 66% for more established immigrants and 67% for the Canadian-born. Turnout rates also differed across regions of birth, as immigrants born in West Central Asia and the Middle East (53%) or East Asian countries (54%) had lower rates, while people born in Western/Northern Europe (77%) or 'Anglosphere' countries (United States, United Kingdom, Ireland, Australia and New Zealand) had the highest rates (75%).

Although immigrant men and women had similar voting rates overall, some differences can be found across regions of birth. Men born in Western and Northern

Europe (excluding the U.K. and Ireland), Southern Europe, Southern Asia, Southeast Asia, and Africa had higher voting rates than women from these regions. The male–female difference was greatest for those born in Africa—11 percentage points. In contrast, women who were born in Anglosphere countries or in West Central Asian and Middle Eastern countries had slightly higher participation rates than their male counterparts.

To what extent do immigrants become engaged in the Canadian democratic system over time? Although this is a difficult question to answer in the absence of longitudinal data, some insight can be gained by examining differences in the turnout rates between recent and established immigrants from the same region of birth (Table 2). For all source regions, the rates were higher among established immigrants. But for some communities, the difference was much larger.⁸ For example, 70% of established immigrants from Africa voted in the 2011 election, compared to just 43% of recent immigrants from that same region. Similarly, the difference between the established and the recently

arrived was also significantly higher among Eastern European (21 percentage points), West Central Asian and Middle Eastern (17 points) immigrants. In contrast, the rates among more established immigrants were only marginally higher than those for the recently arrived who were born in Central/South America or East Asia. The lower rates seen among established immigrants born in Eastern Asia, in particular, suggest that they vote less overall, regardless of age or time spent in Canada.

Economic well-being

Economic well-being could also be positively related to voting participation (U.S. Census Bureau 2010). Examples of variables indicative of economic well-being include labour force status and household wealth.

Table 1 Voting rates by immigrant status and country/region of birth

	Both sexes	Men	Women
	%		
Immigrant status			
All	66.5	65.6	67.4
Canadian-born	67.1	65.9	68.3
Established immigrant	66.3	66.8	65.9
Recent immigrant	51.1	51.2	51.0
Country of birth			
Western/Northern Europe ¹	76.6	78.5	74.7
United States, United Kingdom, Ireland, Australia, New Zealand	75.2	73.8	76.4
Southern Asia	68.1	68.2	68.1
Southern Europe	67.8	69.2	66.4
Canada	67.1	65.9	68.3
Eastern Europe	62.8	62.6	63.0
Africa	62.2	67.2	56.4
Caribbean, Central/South America	61.0	60.0	61.8
Southeast Asia	58.5	59.0	58.2
Other	57.2	58.9	55.8
Eastern Asia	54.1	53.5	54.6
West Central Asia and Middle East	53.4	52.7	54.3

1. Excludes the United Kingdom and Ireland.

Source: Statistics Canada, Labour Force Survey, May 2011.

Table 2 Voting rates of recent versus established immigrants by region of birth

	Immigrants		Difference
	Recent	Established	
	%		% point
Western/Northern Europe ¹	x	76.8	...
United States, United Kingdom, Ireland, Australia, New Zealand	68.2	76.3	8.1
Southern Europe	x	67.8	...
Southern Asia	60.0	70.8	10.8
Africa	43.1	70.3	27.2*
Eastern Europe	45.2	66.3	21.1*
Caribbean, Central/South America	56.3	61.7	5.4
Southeast Asia	48.3	60.7	12.4
Eastern Asia	48.1	55.2	7.1
West Central Asia and Middle East	39.6	57.0	17.4
Other	x	x	...

* significantly different at the 5% level

1. Excludes the United Kingdom and Ireland.

Source: Statistics Canada, Labour Force Survey, May 2011.

Employed individuals were significantly more likely to vote than the unemployed (66% versus 57%) but differed little from those not in the labour force (69%). However, the vast majority of the inactive population is made up of retirees, who are more likely to vote. Among the employed, those working less than 40 hours per week were more likely to vote (69%) compared with those putting in 40 hours of work or more (63%).

Research suggests that wealthier individuals may be more likely to vote (Milan 2005). The LFS does not ask about wealth, but has information on home ownership. Since housing is the most significant component of household wealth for the majority of Canadians,

home ownership can be used as an indicator of household wealth. Similar to results reported for the United States (U.S. Census Bureau 2010),⁹ home owners were much more likely to vote than renters (71% vs. 54%).

Modelling voting participation

The relationships between the variables described above and voting patterns were established by cross-tabulations and may differ under a full set of control variables. This section uses a multivariate model to control for many factors that could affect voting. A probit model is used to estimate the marginal effect of each variable on voting (Table 3). Marginal effects can be

interpreted as the extent to which participation for a group varies from a reference group controlling for other factors in the model.

Most of the associations found in the cross-tabulations persist in the model results. For instance, people under age 45 were less likely to vote, even after controlling for other factors such as region of residence, education level, tenure, immigration, marital and family status, tenure, or labour force status. Higher education levels were also positively associated with voting. On the other hand, immigrants, renters, the unemployed and people with children were significantly less likely to vote.

Some model results did differ from the cross-tabulations. In those instances, the model results should be considered more authoritative. For example, people age 18 to 24 were just as likely to vote as those 25 to 34 when controls for other factors were in place, which differs from the descriptive results. Similarly, the descriptive results had shown that citizens age 75 and over were less likely to vote than 'younger' seniors (age 55 to 74). But when controls were factored in for other characteristics, their probability of voting was higher than that of 55- to 64-year-olds.

The descriptive results also suggested that established immigrants were not much less likely to vote than the Canadian-born, but the probability of voting for established immigrants was lower by 8 percentage points in the model. Since established immigrants tend to be older, their high propensity to vote is mainly related to their age.¹⁰ Similarly, descriptive results indicated that those not in the la-

Table 3 Marginal effects from a probit model of voting^{1,2}

Sex	marginal effects
Male	-0.02*
Age	
18 to 24	-0.14*
25 to 34	-0.15*
35 to 44	-0.10*
45 to 54	ref.
55 to 64	0.10*
65 to 74	0.19*
75 and over	0.17*
Education	
Less than high school	-0.11*
Some high school	-0.08*
High school diploma	ref.
Some postsecondary	0.05*
Trades/certificates	0.05*
University degree	0.17*
Family type	
Married/common law with children 5 years and over or no children	ref.
Married/common law with at least one child under 5	-0.02*
Single with children 5 years and over or no children	-0.05*
Single with at least one child under 5	-0.16*
Divorced or separated	-0.10*
Widowed	-0.11*
Immigrant status	
Canadian-born	ref.
Established immigrant	-0.08*
Recent immigrant	-0.15*
Labour force status	
Employed	ref.
Unemployed	-0.02*
Not in labour force	-0.05*
Home ownership	
Owner	ref.
Renter	-0.11*
Response type	
Proxy response	-0.01*
Not a proxy response	ref.
Rural/urban	
Urban	0.02*
Rural	ref.
Province	
Newfoundland and Labrador	-0.13*
Prince Edward Island	0.11*
Nova Scotia	-0.01
New Brunswick	0.03*
Quebec	0.05*
Ontario	ref.
Manitoba	-0.04*
Saskatchewan	0.00
Alberta	-0.03*
British Columbia	-0.01
Number of observations	96,127
Pseudo R ²	0.09

* significantly different from the reference group (ref.) at the 5% level

1. Dependent variable = 1 if the individual reported voting, 0 otherwise.

2. Marginal effect is for a discrete change in dummy variable from 0 to 1 and is calculated at the means of the independent variables.

Source: Statistics Canada, Labour Force Survey, May 2011.

bour force were more likely to vote. But as mentioned earlier, they are also more likely to be retired and thus older. Correspondingly, the model estimates that people out of the labour force had a lower probability of voting than employed individuals.

Finally, most regional differences remained after controlling for other factors. Compared to Ontario, eligible citizens were more likely to vote in Prince Edward Island, Quebec and New Brunswick. In contrast, citizens were less likely to vote in Newfoundland and Labrador, Alberta and Manitoba.

Employment characteristics and voting

Since the LFS includes detailed work-related information, it can be used to study whether employment characteristics have an influence on the probability of voting among workers. A model was therefore estimated by restricting the sample to employed citizens, and included work-related characteristics such as hours of work, class of worker (public employed, private employed and self-employed), occupation and spouse's work situation. Since some personal characteristics may be associated with labour market outcomes, the model was estimated in steps—first by including work-related characteristics, and then by progressively including additional controls related to personal characteristics (the same ones that were used in Table 3).

Hours of work were not linearly associated with voting. In a model with work-related variables only (Table 4, Model 1), individuals working 30 to 39 hours per week were more likely to vote than those working fewer hours, while those working longer hours were less likely to vote. The results changed little when additional controls were introduced into the model (Models 2 and 3), except that the results were negative but statistically insignificant for the 30-to-39-hours category. Working 40 hours per week or more was therefore negatively correlated with voting.

Public-sector employees were more likely to vote than those working in the private sector, when all variables were included in the model.¹¹ This may be due to public-sector workers being more directly affected by some public policy decisions (Blais et al. 1990).

Some occupations were associated with a higher probability of voting. Occupations that had higher levels of voting were typically occupations demanding higher skills—management occupations; business, finance and

Table 4 Marginal effects from a probit model of voting among the employed^{1,2}

	Model 1	Model 2	Model 3
Weekly hours worked		marginal effects	
Less than 30	ref.	ref.	ref.
30 to 39	0.03*	0.00	-0.01
40	-0.03*	-0.04*	-0.03*
More than 40	-0.04*	-0.04*	-0.03*
Spousal employment status			
Employed	0.09*	0.08*	0.03*
Not employed	ref.	ref.	ref.
Sector			
Public	0.11*	0.06*	0.03*
Private			
Self-employed	0.06*	0.04*	-0.02
Not self-employed	ref.	ref.	ref.
Occupation			
Management	..	0.08*	0.03*
Business, finance and administrative	..	0.03*	0.02*
Natural and applied sciences and related	..	0.08*	0.06*
Health	..	0.04*	0.01
Social science, education, government service and religion	..	0.10*	0.06*
Art, culture, recreation and sport	..	0.05*	0.04*
Sales and service	..	ref.	ref.
Trades, transport and equipment operators and related	..	-0.04*	-0.04*
Primary industry	..	-0.01	0
Processing, manufacturing and utilities	..	-0.07*	-0.05*
Industry controls	No	Yes	Yes
Personal characteristics	No	No	Yes
Number of observations	60,123	60,123	60,123
Pseudo R ²	0.02	0.04	0.09

* significantly different from the reference group (ref.) at the 5% level

1. Dependent variable = 1 if the individual reported voting, 0 otherwise.

2. Marginal effect is for a discrete change in dummy variable from 0 to 1 and is calculated at the means of the independent variables.

Source: Statistics Canada, Labour Force Survey, May 2011.

administrative occupations; natural and applied sciences occupations; social science, education, government service and religion occupations; and art, culture, recreation and sport occupations—even after

controlling for education. Conversely, workers in trades and transport, and equipment operators and related occupations, and those in occupations unique to processing, manufacturing and utilities were

about 5 percentage points less likely to vote than those in sales and service occupations.

Conclusion

In collaboration with Elections Canada, the Labour Force Survey (LFS) asked May 2011 respondents whether they had voted in the federal election earlier that month. Since the LFS includes many sociodemographic and employment variables, and has a large sample size, the voting questions presented a unique opportunity to study factors associated with voting.

Results indicate that individuals under age 45 were less likely to vote, even after controlling for other characteristics. Single people—particularly single parents with young children—were also significantly less likely to vote. Recent immigrants (who had attained citizenship) and individuals with lower levels of education also had lower voting rates.

On the other hand, older individuals, those with higher educational attainment, home owners, and employed people were more likely to vote than others.

Among the employed, long work hours were negatively associated with voting. Workers in the public sector and high-skill occupations were more likely to vote.

Even after controlling for many sociodemographic characteristics, regional differences remained. Further work would be needed to explain such differences.

In the 1990s, the decline in the overall voter turnout rate was linked with the declining participation of

Data source and definitions

In May 2011, at the request of Elections Canada, the Labour Force Survey (LFS) added three voluntary questions on voting. The questions were:

1. Are you a Canadian citizen?

- (a) Yes
- (b) No

2. In any election, some people are not able to vote because they are sick or busy, or have some other reason. Others do not want to vote. Did you vote in the recent federal election held on Monday, May 2, 2011?

- (a) Yes
- (b) No

3. What is the main reason you did not vote?

- (a) Own illness or disability
- (b) Out of town or away from home
- (c) Too busy / Family obligations / Conflicting work or school schedule
- (d) Weather conditions
- (e) Not interested / Felt voting would not make a difference in election results
- (f) Didn't like candidates or campaign issues
- (g) Not on voters list / Problems with ID requirements
- (h) Too difficult / Transportation problems / Too far to travel / Lines too long
- (i) Forgot to vote
- (j) Religious beliefs
- (k) Other
- (l) Don't know, Refused

If there were no survey non-responses, the turnout rate would be obtained by dividing the weighted voting population (as per Question 2) by the weighted citizen population (as per Question 1). But as is the case in any survey, the voting questions had some non-response (12% of the overall sample). A method was therefore required to impute a response to non-respondents to make them representative of the population as a whole.

One standard technique used to deal with non-response is the 'hot deck' imputation method. The principle of this technique is to use the characteristics of non-respondents, like age, sex and region, to impute responses on the basis of information given from respondents with similar characteristics. This method is based on the assumption that people with similar characteristics would have similar answers if they had responded to the survey. This method would give an overall voting rate of 70%, compared to the Elections Canada rate of 59% (expressed as a share of all citizens).

Other research has shown that refusing to answer voting questions is highly correlated with non-voting (Bauman and Julian 2010). Accordingly, one imputation option is to treat all non-respondents as non-voters. Using such a technique would bring the LFS rate to 63%, much closer to the official rate of 59%. But applying such a technique might not be appropriate since some of the non-responding 12% may not be due to a refusal to answer the voting questions.

Another approach consists of studying the categories of non-response to determine the most appropriate imputation method for each non-response category. As Table 5 shows, the non-respondents were distributed as follows:

- 6.2% answered the LFS but either refused to answer the voting items, or responded "don't know" (item non-response);
- 1.1% were simply not asked about voting, presumably because the interviewer did not receive the voting module, forgot to ask the questions, or faced a difficult respondent;
- 4.8% did not respond to the LFS as a whole, primarily because the respondent could not be contacted or refused to answer the entire LFS survey.

Since non-response on voting items is probably closely associated with non-participation, all 'item non-response' individuals (6.2% of the sample) were imputed as non-voters.¹²

Table 5 Distribution of survey respondents

	Sample	Population	
	number	number	%
Total	96,184	24,919,235	100
Answered both	85,274	21,912,859	88
Imputed voting	10,910	3,006,376	12
Refused/Don't know	5,576	1,537,520	6
Other	5,334	1,468,856	6
Were not asked	1,006	282,981	1
LFS also imputed	4,328	1,185,875	5

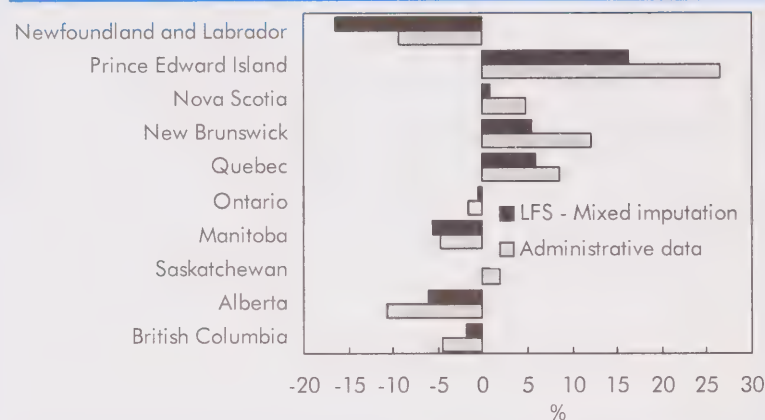
Source: Statistics Canada, Labour Force Survey (LFS), May 2001.

Data source and definitions (concluded)

However, for those who could not be contacted, were not asked by the interviewer, or refused to answer the LFS altogether, the hot deck method was applied. This method yields an estimate of 67%, still a few percentage points higher than the Elections Canada turnout rate based on the citizen population, but significantly lower than the estimate from the full application of the hot deck technique.

One way to examine whether the alternative method yields appropriate results is to compare the provincial differences obtained with the provincial differences published by Elections Canada. Provincial patterns in turnout were similar across the two sources, although the magnitude of the difference from the national average changed for some provinces (Chart D). The mixed imputation method also reduced the difference between administrative and survey data sources across age groups, which tend to be particularly concentrated among the youngest and the oldest.

Chart D Difference from national turnout rate



Sources: Statistics Canada, Labour Force Survey (LFS), May 2011; Elections Canada.

younger voters. Since the early 2000s, however, the rates have been relatively stable in Canada, and the participation rate of younger age groups even increased, albeit modestly. In addition, Canada was not alone in experiencing declines in the 1990s, as voter turnout also declined by similar margins in United Kingdom over the same period. In the United States, however, the participation in presidential elections did not decline as much in the 1990s and increased in the 2000s, particularly due to an increase in the youth vote. These gains, however, took place against a backdrop of much lower U.S. participation rates in the 1980s and 1990s.

Perspectives

Notes

1. The reasons for not voting were discussed in a brief *Daily* article following the June release of the Labour Force Survey (*The Daily*, July 5, 2011). The article showed that 40% of non-voters who answered the question cited reasons such as "too busy, out of town, not on voters list, too difficult, transportation problems" for not voting, and another 35% cited a lack of interest for not voting ("not interested, didn't like the candidates or campaign issues").
2. The reason Elections Canada uses the registered population is that the number of registered electors is a count, and therefore not subject to statistical manipulation, sampling variation or later revision. However, when comparing different groups, the citizen population might be a better base as some groups might have different list coverage. Also, the LFS does not have information on registration.
3. Other reasons might include recollection issues by survey respondents, and the extent of questions answered by proxy among groups less likely to vote (like parents answering for their children). Also, the survey did not cover the territories, reserves and armed personnel—some of these regions/groups might have lower turnout rates compared to the national average.
4. Elections Canada only produced rates by age and province.
5. Similar results for the U.S. have been mentioned in Plutzer (2002).
6. Some of the educational categories were collapsed due to small sample sizes for certain age groups, for example, only 1.6% of those age 18 to 24 had an education level of less than high school.
7. Rates not provided for the widowed as only very few had children under 5 years of age.

Changes in participation rates

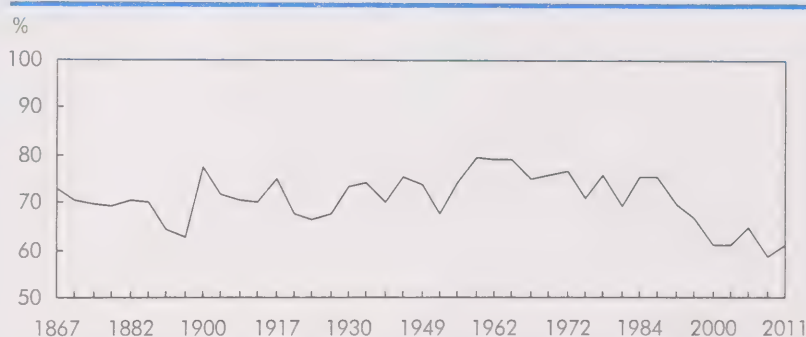
Because Statistics Canada surveys did not enquire about voting participation prior to the late 1990s, analysis of changes in participation rates over time must be based on other sources. Administrative records from Elections Canada can be used to examine the evolution of the turnout rate (expressed as a percentage of the registered population) since Confederation. For most of the 20th century, the official turnout rate fluctuated around 70% or above in Canada (Chart E). However, it declined rapidly over just one decade—the 1990s—and reached unprecedented low levels in the early 2000s.¹³ Since Confederation, the lowest turnout on record was in 2008, with 58.8 % of the registered population casting a vote. It improved marginally to 61.1 % in 2011. In fact, all elections held after 2000 have had turnouts below 65%.

Why did turnout rates decline over the 1990s? Using data from the Canadian Election Study, Blais et al. (2004) suggest that the vast majority of the decline was due to the fact that today's younger cohorts do not vote as much as older people did when they were the same age, a phenomenon referred to as a generational effect. Blais et al. also suggest that the overall decline was partially offset by gains attributable to the increase in educational attainment and in the growing proportions of older

population groups, who are more likely to vote. The implication is that were it not for the growing influence of older Canadians and the increase in the educational attainment among youth, the rate would have declined even more (Blais et al. 2004). Various hypotheses have been put forward to explain the decline among young voters over the 1990s, including a lack of political and civic knowledge, a lack of trust and confidence in institutions, changing perceptions of government relevance, and youth's influence on changing government policy (Archer 2003; Adsett 2003; Howe 2008).

In contrast to the 1990s, voting rates in the 2000s have been relatively stable. Elections Canada data do not suggest that the participation rates declined further among youth in recent years. Between 2004 and 2011, the official rate as a portion of the citizen population from age 18 to 24 varied between 37% and 39% (the only exception being 2006 when it reached 44%).

Chart E Voter turnout rates in Canadian federal elections



Source: Elections Canada.

8. Rates could not be provided by sex due to small sample sizes among most groups of recent immigrants.
9. Annual income may also be related to voting behaviour. However, the relationship between household income and voting is mixed (Milan 2005). Furthermore, the study of the relationship between income and voting is not possible with the LFS, as consistent income values for all individuals are not available.
10. When region of birth was included in the model, the results were statistically insignificant for people born in Western and Northern Europe, the United States, Australia, New Zealand, and Southern Asia. On the other hand, people born in the remaining countries/regions were less likely to vote than the Canadian-born.
11. Being a union member was initially included in the model but was found to be highly correlated with working in the public sector and was therefore dropped.
12. The U.S. Census Bureau also deals with item non-response in a similar way. Even with this imputation technique, the rates obtained in the survey results remain generally higher by 3 or 4 percentage points (with the exception of the 2008 presidential election when the estimates rate was much closer to the official rate), a gap many attribute to the social desirability phenomenon. Prior to the 1990s, the U.S. Census Bureau also produced estimates that were 10 to 12 points higher than the official turnout rates published by the Office of the Clerk of the U.S. House of Representatives.
13. Caution needs to be exercised when comparing rates over time due to certain legislative changes. Some examples include: (i) Women had the same voting rights as men only starting with the 1918 federal elections; (ii) In 1920, native people everywhere in Canada were enfranchised, but Status Indians had to give up their treaty rights and registered Indian status to do so—that condition was

International comparisons

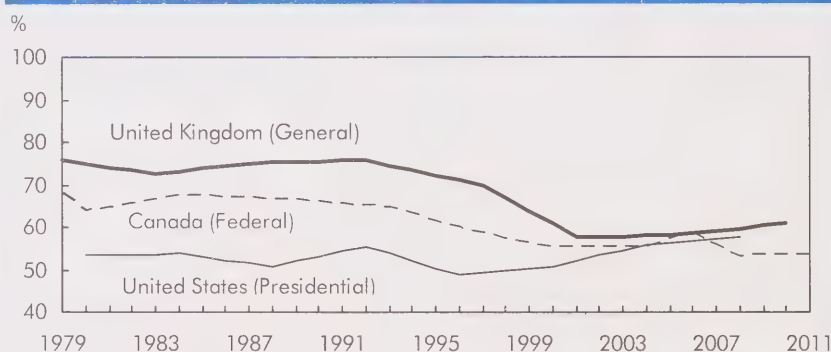
Comparisons in participation rates between countries are not straightforward, not the least because every political system is different. In the United States (U.S.), legislative elections take place every two years to elect all of the House of Representatives and one-third of the Senate. Presidential elections occur every four years at a fixed date (in November), and typically command more attention from the media and the public. In this section, Canadian federal elections are compared to U.S. presidential and mid-term elections, but also to United Kingdom (U.K.) general elections because the Canadian electoral system is largely inspired by the Westminster system of government.

For all three countries, estimates must be produced for both the number of voters (the numerator) and the base population (the denominator). Given known survey differences between countries and the lack of long-term survey data for Canada, the official counts are taken from both countries to generate the number of voters. For the denominator, the voting-age population is used as comparable alternatives across countries would be more difficult to obtain.¹⁴

From the late 1970s to the early 1990s, the participation rate was relatively stable in all three countries. Historically, the rates were higher in the United Kingdom as participation typically amounted to about 75% of the voting-age population, compared to about 66% in Canada and less than 55%

in the United States (Chart F). However, during the 1990s, participation rates in both Canada and the U.K. declined significantly, while the participation rate in U.S. presidential elections remained relatively stable and increased over the 2000s to reach 58% of the voting-age population in 2008—mainly because of significant increases in the participation of young citizens (U.S. Census Bureau 2010). The pattern now appears to be one of convergence, as participation in all three countries varied between 50% and 60% in almost every election since the mid-2000s. However, participation rates in Canada and the U.K. remain much higher than those in the U.S. mid-term elections, which have much lower participation rates than presidential elections (similarly defined participation rates at mid-terms varied between 33% and 38% over the 1979 to 2011 period).¹⁵

Chart F Voters as a percentage of voting-age population in Canada, the United States and the United Kingdom



Sources: To ensure consistency, voting-age population figures for each country were taken from the Human Mortality Database (HMD). The HMD (www.mortality.org) ensures that a similar methodology is used to estimate population estimates by age by using the most recent census count in each country. Voting numbers were retrieved from Elections Canada, the office of the Clerk of the U.S. House of Representatives, the U.K. Election Commission, and the Library of the British House of Commons. Numbers from the 1979 U.K. General Election were retrieved from the BBC (British Broadcasting Corporation) archives.

removed from election legislation in 1960; (iii) In 1970, the voting age was lowered from 21 to 18 years; (iv) In 1993, for the first time, qualified voters living outside Canada were allowed to vote by mail in their home riding; (v) For the first time in the 2000 federal election, homeless people were able to vote; and (vi) Incarcerated electors serving less than two years were allowed to vote for the first time in 1993 and those serving two years or more in 2002, as a result of Supreme Court rulings in *Sauvé versus Canada (Attorney General)*.

14. One caveat is that the voting-age population includes non-permanent residents who do not have the right to vote, which may vary from country to country. One

alternative would be to use the number of citizens, but consistently defined estimates are difficult to obtain for every country. Another denominator could be the registered population, but it could not be used because the registration process differs across countries (and even across American states).

15. Furthermore, if the rate were expressed as a share of the citizen population, the U.S.–Canada difference seen in 2008 would be somewhat larger because the United States has a slightly higher share of non-permanent (and incarcerated) residents.

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What's new?

Recent reports and studies

■ From Statistics Canada

■ *Income adequacy in retirement*

Studies of income adequacy for elderly Canadians typically use two measures: the rate at which income falls as seniors age, that is the income replacement rate, and the consumption replacement rate. 'Potential income,' which includes both income and potential income from assets, is an alternative that can provide a more comprehensive picture of the financial status of households.

The study, based on the 1999 Survey of Financial Security, finds that the potential income of retirement-age households is much closer to that of working-age households than the conventional measures of income or consumption. Moreover, after accounting for taxation, potential income per adult-equivalent in senior households exceeds the income of households headed by younger adults.

The study includes sensitivity tests that demonstrate how the results regarding the interest rates applied in the wealth-to-income formulas and economies of scale within households vary under differing assumptions.

For more information, see *Income Adequacy in Retirement: Accounting for the Annuitized Value of Wealth in Canada*, Economic Analysis (EA) Research Paper Series, Statistics Canada, November 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Economic growth in Canada and the United States*

Three measures of economic performance are used to compare economic growth in Canada and the United States from 1997 to 2011: labour productivity; real gross domestic product (GDP); and real gross national income (GNI). Based on labour productivity alone, Canadian output fell by 17% relative to the United States. Yet, using the real GDP over the same

period, Canada's living standards rose by 5% compared to those in the United States. When considering the real GNI, Canada's living standards rose by 12 % relative to the United States.

Labour productivity, GDP per capita and GNI per capita of both countries are compared to highlight how each measure has very different results. The findings suggest that GNI per capita offers the most comprehensive picture of economic performance because it takes productivity and employment growth, capital investment and terms of trade into account.

For more information, see *Economic Growth in North America: Is Canada Outperforming the United States?*, Economic Insights Analytical Paper Series, Statistics Canada, December 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Recent trends in Canada's labour force participation rate*

This study uses the Labour Force Survey to demonstrate how cyclical and demographic forces contribute to changes in the participation rate. Overall labour force participation rose by 3 percentage points from 1997 to 2003 and remained close to that level until 2008. The participation rate then fell by almost 1 percentage point during the labour market downturn and has yet to recover.

The study describes how population aging is changing the composition of the labour force. The population share of the high-participation 25-to-54 age group is declining while the share in the lower-participating 55-and-over population is increasing. On the other hand, the population share of youth, another lower-participation group, is also falling. Over the period from 1997 to 2011, the study estimates that this compositional effect has dampened labour market participation by about 3 percentage points.

The study also describes participation rates within age groups. Youth and core-age rates demonstrate more cyclical patterns while there has been a substantial increase in the participation rate of the 55-and-over population since 1997.

For more information, see the December 2011 issue of *Canadian Economic Observer*, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Risk of layoff and earnings losses of laid off workers*

This study uses the Longitudinal Worker File (LWF) and Labour Force Survey (LFS) to examine the risk of permanent layoff and the related earning losses during the periods from 1978 to 1980 and from 2005 to 2007.

Overall, workers were less likely to experience job loss in the mid-2000s than during the late 1970s. On average, for those who were laid off from non-manufacturing jobs, median earnings losses were smaller in the mid-2000s than during the late 1970s. On the other hand, men age 25 or over who were laid off from manufacturing jobs experienced larger earnings losses in the mid-2000s than those in the late 1970s.

The study found little or no difference in earnings losses between the two periods for women laid off from manufacturing jobs.

Short-term earning losses of both men and women who were laid off from manufacturing jobs increased from the late 1990s to the mid-2000s, two periods with similar labour market conditions. This increase in earnings losses coincides with the employment decline observed in manufacturing since 2004.

For more information, see *How Have the Risk of Layoff and Earnings Losses of Laid-off Workers Evolved Since the Late 1970s in Canada?*, Analytical Studies Branch Research Paper Series, Statistics Canada, December 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Personal networks and the economic adjustments of immigrants*

Despite an increasing focus on training and job skills in the selection of immigrants, recent immigrants are not doing as well in the labour market as earlier cohorts of immigrants. Nor is their income converging as quickly to the similarly qualified Canadian-born.

This article examines whether personal networks are related to the gap in employment rates and income levels between immigrants and other Canadians.

Data from the 2008 General Social Survey (GSS) indicate that immigrants are less likely to be a member of or participate in an organization. Furthermore, the social networks of immigrants are smaller and less diverse than those of the Canadian-born. In particular, the acquaintances of immigrants work in a narrower range of occupations. However, the longer immigrants lived in Canada, the more diverse their personal networks became. The study also found that the diversity, as opposed to the size, of their social networks was significantly related to employment and income.

For more information, see the November 3, 2011, issue of *Canadian Social Trends*, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Export growth, capacity utilization and productivity growth*

This paper examines conditions related to the labour productivity slowdown. It compares the general economic environment and changes in productivity during the period from 1990 to 1996 and from 2000 to 2006.

The two periods differed both in demand conditions faced by the manufacturing sector and the levels of capacity utilization in manufacturing. Capacity utilization in manufacturing averaged 86% in 1999 before declining by 5 percentage points in 2003 and rising slightly to 83% in 2006.

The study estimates that 55 % to 90 % of the cumulative productivity slowdown is related to changes in level of capacity utilization. In the period from 2000 to 2006, the Canadian manufacturing sector contracted at an average rate of 0.3% annually compared with 3.4% annual growth in the early 1990s. Most of the decline in aggregate labour productivity was a result of economic conditions that led to the development of excess capacity.

For more information, see *Export Growth, Capacity Utilization and Productivity Growth: Evidence from Canadian Manufacturing Plants*, Economic Analysis Research Paper Series, Statistics Canada, December 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Registered retirement savings plan contributions*

In 2010, just under 6.0 million tax filers contributed to registered retirement savings plans (RRSPs), down 0.2% from 2009. Although there were fewer contributors, their total contributions increased 2.6% to \$33.9 billion.

The greatest percentage increases in the number of contributors occurred in Yukon at 4.4% and Saskatchewan at 3.3%.

Contributions increased across Canada, notably by 8.8% in Nunavut and 8.0% in Yukon. Prince Edward Island experienced the smallest increase at 0.1%.

Although 93% of tax filers were eligible to contribute to an RRSP for the 2010 tax year, only 26% of those eligible made a contribution. Contributions totalled \$33.9 billion, about 5.1% of the possible total contribution room available.

In 2010, the median contribution was \$2,790, up 4.1% from the previous year.

For more information, see the December 2, 2011, issue of *The Daily*, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Aboriginal peoples and the labour market*

This report looks at the labour market outcomes of Aboriginal peoples during and after the recent labour market downturn. It covers the period from 2008 to 2010, using data from the Labour Force Survey (LFS).

Job losses persisted over a longer period for Aboriginal peoples than for non-Aboriginal peoples. From 2008 to 2010, employment for core-age Aboriginal peoples declined by 7.1% compared to a 0.1% loss for non-Aboriginal peoples in the core-age group. Because of this decline, the gaps in employment, unemployment and participation rates widened between Aboriginal and non-Aboriginal peoples in Canada. In 2010, the participation rate for the Aboriginal working-age population was 62.6%, compared with 67.1% for the non-Aboriginal population.

During the recent labour market downturn, employment rates fell across all education levels for core-age Aboriginal and non-Aboriginal workers. Youth were particularly affected as participation rates fell among

Aboriginal and non-Aboriginal youth, particularly among Aboriginal youth, of whom more were attending school during this period.

An increasing proportion of Aboriginal workers age 55 and over participated in the labour market from 2007 to 2009, but the proportion declined in 2010. This decline in the participation rate was more apparent among Aboriginal peoples living off-reserve.

For more information, see *Aboriginal People and the Labour Market: Estimates from the Labour Force Survey, 2008–2010*, The Aboriginal Labour Force Analysis Series, Statistics Canada, November 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Education outcomes of immigrant children*

Using the 2006 Census, this paper looks at the patterns of high school completion for immigrant children based on age of arrival. The risk of not completing high school increases significantly for children who immigrate to Canada after the age of 9.

For those who came to Canada before the age of 9, the risk of not graduating from high school is estimated to be approximately 15% for boys and 11% for girls. In addition, there is an increase of about 1 percentage point for every year after this, reaching from 20% to 25% for those arriving in the country after the age of 13. This risk may be related to the challenges children face learning a second language.

The findings suggest that the linguistic challenges young immigrants face vary according to the linguistic distance of the language in their country of origin from English. No pattern was found for those who came from English-speaking or French-speaking countries.

For more information, see *Age at Immigration and the Education Outcomes of Children*, Analytical Studies Branch Research Paper Series, Statistics Canada, October 2011, available on Statistics Canada's website (www.statcan.gc.ca).

■ *Do relative Canada/U.S. prices equate to the exchange rate?*

This article examines price differences between Canada and the United States based on a comparison of the market exchange rate and purchasing power parity (PPP). The law of one price hypothesizes that the price

of a good in Canada is equal to the price of that good in the United States multiplied by the exchange rate. However, this is seldom the case given high transportation costs and trade barriers. Since the law of one price refers to only a single commodity, it is necessary to assess price differences based on the more comprehensive PPP measure, which looks at the differences in the overall price level between countries.

The CAN/U.S. PPP exchange rate and the CAN/U.S. market exchange rate have occasionally had similar levels. However, the rates have also differed substantially. The market exchange rate had been as much as 10 cents higher than the PPP exchange rate in the early 1970s. In the mid-1980s there was a reversal whereby the market exchange rate fell below the PPP exchange rate by 10 cents. In 2000/2001, there was a 19-cent gap, when the market exchange rate fell. After 2002, the appreciation of the Canadian dollar eliminated this gap, and by 2010 the market exchange rate exceeded the PPP exchange rate by 8 cents.

For more information, see “Do relative Canada/U.S. Prices equate to the exchange rate,” *Economic Insights*, Statistics Canada, January 2012, available on Statistics Canada’s website (www.statcan.gc.ca).

■ *Exchange-rate adjusted prices in Canada*

From 1990 to 2002 there was a depreciation of the Canadian dollar and lower relative prices in Canada. As the exchange rate subsequently appreciated, the median exchange-rate adjusted price rose to 124% of that of the U.S in 2010.

The authors concluded that prices in Canada and the United States generally do not equate. Relative prices shift when there are changes in the exchange rate. Specifically, Canadian prices decrease relative to American prices when the Canadian dollar devalues, and increase when the dollar appreciates. In other words, when the dollar devalues, Canadians tend to pay less and they pay more when the dollar rises.

This paper uses the comparative price level (CPL) to examine the relative prices of Canadian and U.S. products to assess the extent to which changes in relative prices relate to changes in the nominal exchange rate. The CPL is calculated for each commodity group by taking the ratio of the price in Canada to the price in

the United States and adjusting for differences in the Canada/U.S. exchange rate. Final prices paid by consumers, which include all taxes and margins, are used.

For more information, see “New evidence on exchange-rate adjusted prices in Canada,” *Economic Insights*, Statistics Canada, January 2012, available on Statistics Canada’s website (www.statcan.gc.ca).

■ From other organizations

■ *General and vocational education and labour-market outcomes*

While some countries have educational systems that stress vocational training in order to prepare students to work in particular occupations, others employ a general education approach to serve as a foundation for further learning. Still others provide an integrated general and vocation education, or ‘dual system.’

The authors argue that vocational education leads to slower adoption of new technologies and consider the impact of rapid technological and structural change for the hiring of workers with vocational and general education.

The study shows that individuals with a general education are initially less likely to be employed than those with a vocational education. Despite this initial advantage, the gap in employment rates narrows by 2 percentage points every 10 years. On average, by age 50 individuals completing a general education are more likely to be employed than individuals completing a vocational education.

Despite these labour market differences, there is a substantial overlap in literacy test scores for individuals completing general and vocational education.

This paper utilizes an international sample of labour-market outcomes using data for 18 countries from the International Adult Literacy Survey (IALS). It studies the difference in life-cycle work experience between individuals receiving vocational and general education.

To view this article, see “General Education, Vocational Education, and Labor-Market Outcomes Over the Life-Cycle,” Eric A. Hanushek, Ludger Woessmann and Lei Zhang, NBER Working Paper, *NBER Digest Online*.

■ *Fixed-term and permanent employment contracts*

The labour markets of many OECD countries comprise two types of jobs: temporary (fixed term) and permanent (the employer faces some type of monetary loss at dismissal).

This paper explores the conditions under which firms and workers decide to enter a permanent or temporary relationship based on 'match quality.' The authors provide a theoretical framework and model to evaluate the impact of firing costs on the shape of the wage distribution.

According to the model, a 50% increase in firing costs of permanent workers increases wage inequality by 20%, primarily due to the increase in the proportion of temporary workers. The increasing proportion of temporary workers is due to a relative price drop as the firing costs of permanent workers rise. That is, permanent workers become more expensive relative to temporary workers when firing costs rise.

The model also implies that an increase in firing costs lowers overall turnover costs and decreases the unemployment rate.

The Workplace and Employee Survey (WES) was used to link workers' wages to average labour productivities of the firms that employ them. This relationship, combined with measures of turnover for permanent and temporary workers (WES), forms the basis of the structural estimation procedure.

To view this article, see *Fixed-Term and Permanent Employment Contracts: Theory and Evidence*, Shutao Cao, Enchuan Shao and Pedro Silos, Bank of Canada Working Paper 2011-21, October 2011.

■ *Families, time, and well-being in Canada*

This paper examines changes in the paid work hours and family income of Canadian families with children. The paper focuses on two-parent families with children but includes a separate analysis of lone parent families.

The Survey of Consumer Finances and the Survey of Labour and Income Dynamics were used to see how the incomes of Canadian families evolved from 1971 to 2006. These findings were then supplemented with data on time use and self-reported well-being of Canadian parents from the General Social Survey.

The study finds that incomes have increased at the top of the distribution since the mid-1990s without any significant increases in family hours of paid work. In contrast, the income of families in the middle has stagnated, despite the fact that couples are jointly working more paid hours.

The study also found that low-income parents have become significantly more time-crunched than high-income parents.

To view this article, see "Families, time, and well-being in Canada," *Canadian Public Policy*, September 2011.

■ *Private equity and employment*

This paper uses the U.S. Census Bureau's Longitudinal Business Database to examine the impact of leveraged buyouts on employment. Specifically, it looks at the claim that business acquisitions, where a significant portion of the purchase price is financed by borrowing, typically lead to significant job loss.

When compared to similar establishments that had not been involved in private equity transactions, employment at establishments, post-buyout, declined by 3 % over two years and 6 % over five years. On the other hand, target firms created new jobs at new establishments. After considering employment at the firm level as opposed to the establishment level, net relative job loss is less than 1 % of initial employment.

The findings suggest that a private equity buyout has a small net impact on employment, but accelerates the reallocation of employment between establishments within firms.

To view this article, see "Private equity and employment," Steven J. Davis et al., NBER Working Paper, *NBER Digest Online*.

■ *Changes in physical exertion over the business cycle*

This paper estimates the effect of unemployment on physical exertion utilizing the Metabolic Equivalent of Task (MET) as a standardized unit to measure physical exertion.

On average, work constitutes about 26% of total activity for individuals from 25 to 55 years of age. However, for low-educated males, work constitutes about 33% of total activity. On average during the 2007

recession, the exercise MET rose by 3, while the work MET declined by 19. For individuals who had lost their jobs during the recession, this meant total daily physical exertion declined by 21% to 24%.

The findings suggest that unemployment is associated with an increase in time spent exercising. Despite this increase, individuals' total physical activity declines. This decline is due to reduced physical exertion associated with being laid off from physically demanding work and an increase in domestic sedentary activities.

Though effects do differ across socio-economic factors, the decline of physical exertion has an impact on both the individual and his or her spouse. Spousal job loss allows the laid off spouse to take over domestic tasks, which frees up time for the employed spouse who then also experiences a significant decrease in physical exertion.

To view this article, see "Exercise, physical activity, and exertion over the business cycle," Gregory J. Colman and Dhaval M. Dave, NBER Working Paper, *NBER Digest Online*.

■ ***Occupation-specific work experience and job matching through social networks***

This study looks at how work experience affects informal job recruitment. The findings indicate that work experience is related to the accumulation of social capital for men but not for women.

Among men, those who have related occupational experience are significantly more likely to attain employment without actively seeking it. For men, each year of occupational-specific experience is associated with an 11.6% increase in being informally recruited to a new job in that occupation.

Men who were informally recruited are more likely to be in higher-skilled jobs compared to men who went through a formal job search. On the other hand, women are more likely to find temporary and contract work when informally recruited.

The findings offer an alternative explanation for the differences in wages linked to work experience between men and women. Wage differences may be related to differences in social capital in work environments.

To view this article, see "What you know or who you know? Occupation-specific work experience and job matching through social networks," Steve McDonald, *Social Science Research*, Elsevier, November 2011.

■ ***Poverty, perceived ability and access to education equity***

Using Toronto District School Board (TDSB) and Ontario Ministry of Education data, this study explores the educational opportunities available to secondary students in the Greater Toronto Area (GTA). Specifically, it looks at educational programs available in public secondary schools and their relationship to student and parent characteristics, such as low-income status, parental acquisition of university education, and student use of special education services.

The research found an overrepresentation of low-income students in programs that offer few options for postsecondary education. Students from low-income families are least likely to participate in university-bound programming while students with university-educated parents are more likely to do so. Schools with university-track programming are less likely to have a high proportion of students in special education.

Lower- and higher-income areas around the GTA were found to offer different educational opportunities. Vocational-focused programs are mostly found in Toronto's lower-income neighbourhoods. On the other hand, French Immersion programs are more likely to be offered in wealthier areas.

To view this article, see "The Toronto connection: Poverty, perceived ability, and access to education equity," *Canadian Journal of Education*, Fall 2011.

Perspectives

In the works

Some of the topics in upcoming issues

■ Hours-weighted median wage series

This paper uses data from the Labour Force Survey to introduce a new measure of job quality based on wages. The use and interpretation of the indicator will be applied to the most recent business cycle.

■ Job search methods

Using data from the Labour Force Survey, this paper compares the job search strategies utilized by older and younger job seekers. It will account for the differing industries, classes of worker, education and unemployment duration between the two groups.

■ Labour market reallocation after the downturn

This article studies changes in the industrial and occupational distribution of jobs before, during and after the recent downturn, and utilizes data from the Labour Force Survey to compare net changes in employment levels.

■ Occupational composition and the immigrant earning gap

This study examines how immigrant wage differentials have changed across occupational groups with a focus on the differences in hourly wages and the demographic composition of occupational grouping to form a comprehensive picture of interoccupational and intraoccupational wage differentials. The analysis is based on the Canadian census (1991 to 2006) and the Survey of Labour and Income Dynamics (1993 to 2009).

■ Youth neither enrolled nor employed

A number of OECD countries have noted increases in the proportion of their youth population who are neither employed nor enrolled in school. This article examines recent Canadian trends among Canadian youth.

Perspectives

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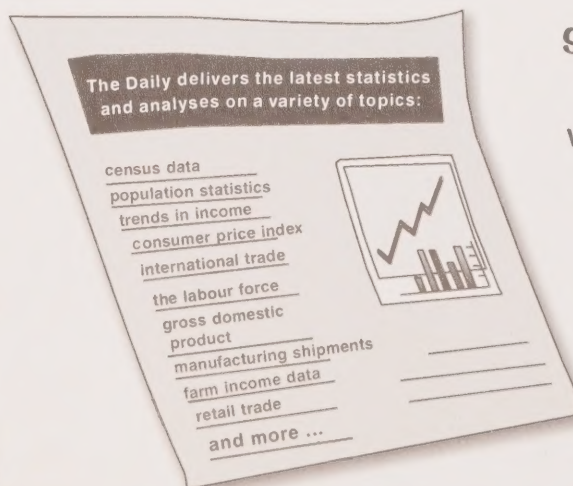


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